#Let's Create AtmanirbharBharatTogether

Hind Vidya Prachar Samiti's
RAMNIRANJAN JHUNJHUNWALA COLLEGE (Autonomous)
Opp. Ghatkopar Railway Station, Ghatkopar (W), Mumbai 400 086

MINORITY

APPLICATIONS ARE INVITED FOR THE FOLLOWING CLOCK HOURS BASIS POSTS FOR THE ACADEMIC YEAR 2023-2024

AIDED

Sr. No.	Cadre	Subject	Total No. of CHB Posts	Category
1	Assistant Professor	English	02	02 – OPEN
2	Assistant Professor	Hindi	02	02 – OPEN
3	Assistant Professor	Economics	01	01 – OPEN
4	Assistant Professor	Botany	12	12 – OPEN
5	Assistant Professor	Zoology	08	08 – OPEN
6	Assistant Professor	Physics	16	16 – OPEN
7	Assistant Professor	Chemistry	13	13 – OPEN
8	Assistant Professor	Sociology	01	01 – OPEN
9	Assistant Professor	Statistics	06	06 – OPEN
10	Assistant Professor	Commerce	02	02 – OPEN
11	Assistant Professor	Mathematics	02	02 – OPEN

The above posts are open to all, however, candidates from any category can apply for the post.

Reservation for women will be as per **University Circular No. BCC/16/74/1998 dated 10th March, 1998.** 4% reservation shall be for the persons with disability as per **University Circular No. Special Cell/ICC/2019-20/05 dated 05th July, 2019**.

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18th July, 2018, Government of Maharashtra Resolution no. Misc-2018/C.R.56/18/UNI-1 dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241 dated 26th March, 2019 and revised from time to time".

Remuneration of the above post will be as per University Circular No. TAAS(CT)/01/2019-2020 dated 02nd April, 2019 & University Circular No. CTAU/23/2021-2022 dated 25th January, 2022. The Government Resolution & Circular are available on the **website: mu.ac.in.**

Applications with full details should reach the PRINCIPAL, Hind Vidya Prachar Samiti's RAMNIRANJAN JHUNJHUNWALA COLLEGE, Opp. Ghatkopar Railway Station, Ghatkopar (W), Mumbai 400 086, **within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-
PRINCIPAL

In This Issue

Innovation Experiments at Indira Gandhi National Open University and National Education Policy—2020 Implementation

Nageshwar Rao* and Oum Prakash Sharma**

The National Education Policy (NEP)–2020 launched on 29th July 2020, is considered to revolutionize the entire education system in India. One of the major pillars of NEP–2020 is to foster creativity, critical thinking, research, and innovation among the students thereby transforming India into a knowledge and self-reliant society. NEP–2020 focuses mainly on encouraging an environment of research and innovation in Higher Education Institutes and creating innovative pathways for teaching-learning, research, and learner-support services. Some of the major thrust areas which are categorically emphasized in NEP–2020 include setting up start-up incubation centers, industry-academic linkages, hand-holding mechanisms for nurturing creative and innovative ideas of students, organizing competitions for promoting innovation among student communities, creating a culture for innovation, promotion of creativity among students and faculty, innovations in curriculum, teaching and pedagogy, innovation in technology-enabled learning and assessment, etc.

In order to implement the National Education Policy–2020, the Indira Gandhi National Open University (IGNOU) has taken several innovative initiatives in terms of curriculum design, study material development, pedagogy, learner support, and assessment system. At the same time, IGNOU has tried to create an innovation ecosystem in the University aimed at promoting, supporting, and nurturing innovation and innovative practices by the students as well the teachers. In view of the NEP–2020, several innovative experiments have been conducted at IGNOU. In fact, IGNOU has a dedicated Centre 'National Centre for Innovations in Distance Education' (NCIDE) for promoting, supporting, re-engineering, and disseminating innovations and innovative practices in Open and Distance Learning (ODL) system which is the only of its kind in any higher education institute in the country. NCIDE has organized a number of activities and programmes for promoting innovation, entrepreneurship and startup, and thus creating a culture of innovation in the university.

Keeping in view the main thrust areas of NEP–2020 pertaining to creativity, innovation and entrepreneurship, IGNOU has created an innovation ecosystem in the university. The innovation ecosystem at IGNOU includes mainly seven major components viz. Promoting the

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Culture of Innovation, Identifying and Recognizing Innovators and Entrepreneurs, Incubating & Nurturing Innovations and Entrepreneurship, Re-engineering the Processes and Finding Innovative Solutions, Encouraging and Empowering Faculty for Innovation, Documentation & Dissemination of Innovations, and Networking & Collaboration with Innovators. The Innovation Ecosystem at IGNOU(Figure-1) not only aligns with NEP–2020 provisions, but it caters to the National priorities, SDGS, and International demand in the education sector.

Promoting the Culture of Innovation and Entrepreneurship

As envisioned in the NEP–2020, IGNOU has taken several innovative initiatives toward promoting the culture of innovation and entrepreneurship in the university. Some of the important initiatives at IGNOU are presented here.

Innovation Club@IGNOU

The Innovation Club@IGNOU has been set up with the aim of creating a culture of innovation among the faculty members, staff, and IGNOU students in the University. The objectives of the Innovation Club@IGNOU include generating awareness about creativity, innovations, and IPR, among the faculty members, staff and IGNOU students both at the IGNOU headquarters and the Regional Centres spread across India. The Innovation Club@IGNOU is a platform to brainstorm

Figure 1 : Innovation Ecosystem at IGNOU

on system-specific issues by the faculty and to suggest innovative solutions to address the issues and problems. It also organizes periodic meetings, seminars and workshops for the faculty members focusing on the topics like Innovative Approaches towards developing multidisciplinary programmes in the context of NEP–2020, Innovative Ways of Conducting Examinations in the Pandemic Period, Identifying Gap Areas in Learner Support System at IGNOU for Technology Enabled Innovative Solutions, Innovative Use of Technology for Teaching Practical Oriented Programmes in Distance Mode and IGNOU's Innovation and Startup Policy, etc. Presentations and talks are held on topics such as Innovation for Inclusion of Distance Learners at IGNOU; ICT Tools for Qualitative Analysis of Research Data; Innovation, Research, and Patenting in Higher Education Institutions; Innovative Use of Technology for Teaching Practical Oriented Programmes in Distance Mode; and Idea Bank for Nurturing Innovative Ideas at IGNOU. Besides it, panel discussions on the topics like *Vocal for Local*: How IGNOU can Contribute Towards Atmanirbhar Bharat, Re-thinking Assignment System at IGNOU in Context with the Changing Technological Environment, etc. have also been organized. The discussions in the brainstorming sessions and panel discussions yield rich ideas for quality improvement of the University services and thus helpin effective implementation of the NEP–2020 provisions.

Innovation Club@RC

In order to promote, support and nurture innovations by students at the grassroots level as recommended in NEP–2020, IGNOU has also set up Innovation Clubs at its Regional Centres across India. So far 24 Innovation clubs have also been set up at the Regional Centres of IGNOU. These innovation clubs regularly organize various activities such as brainstorming meetings, presentations, workshops, visits, observing special days, etc., throughout the year to foster a culture of innovation among the students and faculty members of the University. The students, faculty, staff and academic coordinators of the Study Centres take part in different activities of the innovation club to brainstorm on different topics, and problems and find innovative solutions. In this way, IGNOU is trying to encourage the students towards finding innovative solutions to the problems in society and the country.

Weekly Facebook Live sessions

To generate awareness about innovation, entrepreneurship and startups among the students and faculty, and motivate them towards innovation and startups, NCIDE organizes weekly one-hour Facebook Live Sessions on Innovation and Startups. The sessions were delivered through the Official IGNOU Facebook Page at *https://www.facebook.com/OfficialPageIGNOU/*. During last year, forty-nine sessions by experts have been organized for IGNOU students and faculty covering various topics related to Innovation, Entrepreneurship and Startup. These sessions include stories of successful innovations and stories of successful startups, which motivate and encourage other students towards innovation and startups. The recorded sessions are available on Facebook and YouTube channels of the University, which have been watched by thousands of students and faculty across India.

Identifying Innovator and Entrepreneur Students

NEP–2020, envisions that an institutional mechanism should be developed to invite new and innovative ideas from the faculty and other stakeholders on different aspects of the Higher education system. IGNOU is actively engaged in fostering its students towards the *Atmanirbhar Bharat* initiative of the Government of India, through promoting, supporting, and nurturing the innovator students of IGNOU interested in setting up their own startups. In this context, IGNOU organizes various events and competitions like Idea Competition, University Level Innovation Contest, Business Plan Competition, Innovative App Development Challenge- AppNnovate, etc. for IGNOU students. IGNOU also organized 'IGNOU-Specific Innovative App Development Challenge for its students and alumni in 2021, aimed at developing innovative Mobile Applications supported with web-based interfaces to address problems of the ODL system in general and IGNOU in particular as a step towards involving the students in finding innovative solutions to various challenges and problems at IGNOU. The basic objective of all these activities is to identify the potential innovator and entrepreneurs from among the IGNOU students and alumni so that they could be provided with focused training and guidance to take up their ideas and innovations to the next level.

Best Innovation Award Scheme

In order to identify the potential innovator students, IGNOU has instituted the "Best Innovation Award" to be given every year to the best innovator students from across the country. It gives an opportunity to make connect with potential innovator students and contribute towards Government's commitment to creating more and more innovators. This scheme also gave a very strong message that IGNOU is very much committed to promoting and supporting innovation among its students. The shortlisted potential innovators are further guided, supported, and nurtured to take

**Figure 2: Home Page of IGNOU Udyami Portal**

their innovation to the next level. So far more than 50 such potential innovators have been identified and provided mentorship from time to time. Many of these identified innovator students of IGNOU are getting recognized and awarded by several other agencies including the Ministry of Education. As a step to implement the NEP–2020, this kind of initiative can be taken up by other HEIs to identify and recognize potential innovators and budding entrepreneurs, and they can be further nurtured.

IGNOU Udyami

It has been noticed that a large number of IGNOU students have innovative and entrepreneurial mindsets and many of them have their own startups or they are interested in developing their enterprises. But, they do not have proper guidance and support in taking up their Ideas or Startups to the next level. It was, therefore felt that, if such students are identified and provided the right kind of guidance, proper training and other academic support, many of them can do much more than what they are doing now and thus they can be great contributors towards the *Atmanirbhar Bharat* mission of the Government of India. For this purpose, NCIDE has designed and developed an innovative scheme, IGNOU Udyami (Figure-1). It is a scheme for Recognizing IGNOU Student Entrepreneurs (RISE). In fact, the IGNOU Udyami (इग्नू उद्यमी) is an initiative of the University towards *Atmanirbhar Bharat* mission of the Government of India.

Focusing on the four main aspects (Figure-3), the IGNOU Udyami scheme aims at the following basic objectives:

Figure 3: Focus Areas of IGNOU Udyami Scheme
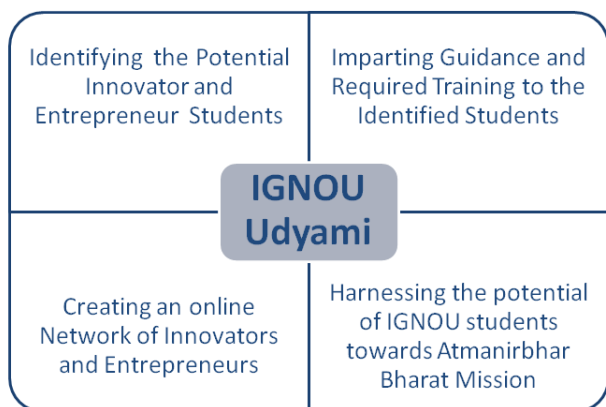
- Identifying and recognizing the innovator and entrepreneur students of IGNOU interested in developing their enterprises or have already developed the same.

- Inculcating entrepreneur mindset among the interested students of IGNOU,

- Imparting guidance, required training and support in taking their ideas or startups to the next level,

- Creating an online network of such innovators and entrepreneurs to collaborate with each other,

- Utilizing the network of IGNOU alumni who are established entrepreneurs to enable the University in mentoring the students, and

- Harnessing the potential of IGNOU students towards *Atmanirbhar Bharat* Mission of the Government of India.

During the last two years, more than 1700 students of IGNOU have shown their interest in innovation and entrepreneurship by registering on the portal. After the implementation of NEP–2020 various awareness and motivational sessions on innovation, startup, and entrepreneurship were organized for the IGNOU Udyami Students. As an outcome of this scheme, several potential innovators and entrepreneurs have been identified and they are being provided with special capacity-building workshops on Innovation and Entrepreneurship.

Idea Competitions

As an activity of the Institutions Innovation Council (IIC), IGNOU has been organising Idea Competitions. The purpose of the Idea Competition is to encourage students towards creative and critical thinking and idea generation. It also aims at identifying, recognizing, and sharing innovative ideas of the students and alumni of IGNOU. Thus, it helps to systematically foster the culture of Innovation through multitudinous modes leading to an innovation promotion eco-system at IGNOU. This activity is also linked to the MoE's initiative to create a National Innovation Repository-YUKTI.

IDEABANK@IGNOU

Ideas are pivotal to the overall growth and excellence of any organization around the world. IDEABANK@IGNOU is an Initiative to create an Online Repository of Ideas and applications in the cloud. Ideas from various stakeholders and

functionaries of the ODL system will be gathered and disseminated. It is also envisaged that a large group of people will collaborate on various projects for the development of an idea into a prototype or a product.

Some of the important features of IdeaBank@ IGNOU are given below.

- It is a one-stop portal at IGNOU to submit and discuss ideas, develop ideas to prototypes or products, collaborate in teams, and document and disseminate ideas and innovative practices.

- It has a colour-coded system for various categories of ideas for the end users to easily co-relate to.

- It is user friendly, mobile friendly, accessible to all the users, and the idea architecture is well planned with simple navigation, etc.

- It is hosted on cloud architecture which is robust, flexible, and reliable with multiple layers of security, including HTTPS and TLS.

Ideas from various stakeholders and functionaries of IGNOU are gathered, and disseminated. It is also envisaged that a large group of people will collaborate on various projects for the development of an idea into a prototype or a product.

IDEA BANK for IGNOU Students

IGNOU has also implemented an online portal for creating a repository of the ideas of the students. Through the portal students involved in various activities and workshops organized by NCIDE can submit their ideas. It is a portal through which students can document their journey from ideas to startups through the e-portfolio component of the portal. Around 21 (Ideas/Proof of Concept) have been uploaded on the portal.

Incubating and Nurturing Innovations and Entrepreneurship

NEP–2020 suggests that innovative ideas should be incubated and supported to develop innovative models. For this purpose, policy advocates setting up Incubation Centres in higher education institutions in partnership with industries. In view of it, IGNOU has taken some innovative initiatives to support, mentor and incubate the identified ideas, innovations, and business plans. These initiatives include the Idea to Startup Scheme, Virtual Incubator, and one-to-one guidance and mentoring of the identified innovators and entrepreneurs.

Idea to Startup Scheme

In order to promote, support and nurture the students of IGNOU interested in setting up their startups, the University has initiated a scheme of "Idea to Startup" for its students. Any student of IGNOU who has developed a prototype or innovative product or system based on new, socially relevant and practicable ideas on the themes viz. food and agriculture, rural development, clean energy and alternate fuel, clean water and water management, *swachhta* initiatives and waste management, health care and hygiene, smart transportation and traffic management, smart city and urban development, social issues and security system, technological innovation and education and system. The basic idea behind this scheme is to encourage Indian youth to become job creators rather than job seekers which is the need of the hour and also it has been emphasized by the National Education Policy 2020.

The basic objectives of the Idea to Startup scheme for IGNOU students are to:

- Spread awareness about Startup India, nurturing Startups at IGNOU, policies and schemes of the Government of India and various state governments among the students of IGNOU

- Train the students by conducting time-to-time idea boot camps, orientation and skill development programs related to their startups

- Assist the students in getting funds from different organizations and governments for their startups.

- Report the innovations and startups of IGNOU learners by showcasing their innovative work and stories about their startups through a portal.

- Trace, identify, recognize and award learners of IGNOU for their startup initiatives.

- Utilize the existing resources of startup hubs (wherever applicable) and develop a strong network of research institutions, the business community, and government organizations to facilitate the IGNOU learners for startups.

- Provide academic and technical support to the students of IGNOU who are interested in startups, and guide them to develop business proposals for their startups.

The selected students from IGNOU Udyami and other schemes of the NCIDE looking to set up

their own enterprise are then mentored and supported through the "Idea to Startup" scheme of IGNOU. This scheme basically supports and promotes the Startup India scheme of the Government of India.

To nurture and support the students, a series of Virtual Incubation Training sessions on "Being your Own Boss", the Online Student Empowerment for Entrepreneurship Development (SEED) Training Programme and various workshops and training programmes have been conducted to promote and support the IGNOU students in setting up their own enterprise. IGNOU faculty also conducts one-to-one mentoring and guidance sessions with the selected potential startup students of IGNOU. A few students who were mentored through these workshops and training programmes are in the process of establishing their Startups.

नVRIETI (नवरीति): A Virtual Incubator

NEP–2020 recommends incubating and mentoring the innovative ideas of the students and faculty for setting up their own enterprises and startups. For that purpose, the policy suggests setting up Innovation Incubators in collaboration with the industry. In the case of IGNOU, it was noticed that many students are interested in developing their enterprises. They do not have proper guidance and support in taking up their business ideas or Startups to the next level. In fact, they need continuous mentoring, hand holding and initial financial support. Moreover, IGNOU students are scattered all over the country. They need to be incubated, nurtured and also connected with each other and with the mentors. In the case of IGNOU, this kind of incubation and mentoring is possible through technological support. Therefore, in order to promote, support and nurture the students interested in innovation and entrepreneurship, NCIDE has designed and developed a virtual incubator named नVRIETI: NCIDE's Virtual Resource and Incubator for Entrepreneurship, Training and Innovation (NVRIETI). It is a one-stop portal for IGNOU students who are interested in innovation, startups and entrepreneurship. It has sections like IGNOU schemes, Learning Resources, Inspiring Stories, Events/Workshop and Important Websites. The section on IGNOU schemes highlights the various schemes of IGNOU for its learners related to innovation, startups and entrepreneurship. The resources section has links to a few online courses, and Learning Resources of NCIDE. Inspiring stories highlight stories of successful innovators and entrepreneurs. The Events and Workshop page highlights the latest events organized by NCIDE, IIC, etc. The page also provides a link to the student portal of नVRIETI: which is password protected and has additional facilities like a variety of learning resources, links to online courses, asynchronous and synchronous modes of communication with the registered learners of IGNOU. The basic objectives of the Virtual Incubator –नVRIETI are as follows:

- Providing pre-incubation support and guidance for identifying the problem areas and ideation for innovative solutions to the problems,

- Providing an online system to facilitate and support the potential innovator and entrepreneur students

Figure 4: Home Page of नVRIETI Portal

of IGNOU in incubating their ideas and converting them into start-ups,

- Building a vibrant virtual innovation and startup ecosystem, by establishing a network between learners, alumni, academia, financial institutions, industries and other institutions,

- Tracking their progress using analytics and the various components of the idea to startup lifecycle and providing handholding and mentoring support in virtual mode,

- Creating a network of entrepreneurs, mentors, investors, volunteers, and service providers together to help IGNOU learners interested in setting up their startups/enterprises,

- Facilitating the potential innovators and entrepreneurs by connecting them with nearby physical incubators and accelerators for the lab-based support and guidance, if required to nurture their start-ups, and

- Making students aware of various funding opportunities and facilitating them to get financial support through different sources.

नVRIETI can be reached directly through the link https://sites.google.com/ignou.ac.in/navrieti. As of now, a total of 92005 end users, in search of Innovation, Entrepreneurship and startup related content, have visited the portal.

Innovative Learning and Student Support Solutions

As NEP–2020 emphasizes, ICT and other cutting-edge technologies should be used for more effective teaching-learning and support to the learners in Higher Education Institutes. IGNOU has fully exploited the use of technology for making the teaching-learning and learner support system more effective and learner-centric. NCIDE has been developing innovative learning and support solutions for the University and the stakeholders through emerging technologies from time to time.

Web Enabled Academic Support (WEAS) System

Web Enabled Academic Support (WEAS) is an innovative learning solution initiated by IGNOU with the aim to provide an interactive one-stop programme portal to help the students in getting academic support on the programme they are enrolled in. WEAS is an interactive one-stop programme portal for providing academic support to distance learners, with components like learning content in the form of digital self-learning material, learning resources like audiobooks, videos, articles, OER, weekly quiz, and

Figure 5: Focus Areas of WEAS
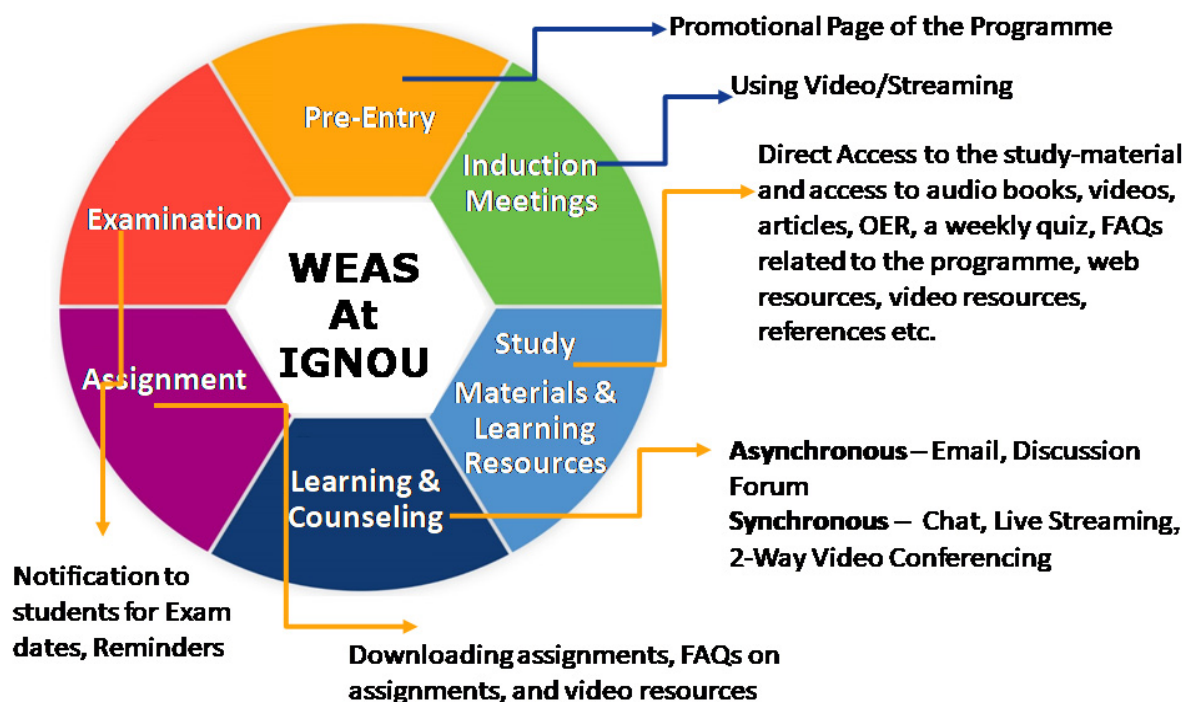
FAQs related to the programme, etc. E-mentoring, collaborative learning through discussion forums, and interactive virtual classrooms are some other useful components of the WEAS portal.

Distance learners of different programmes, particularly low enrolment programmes have extensively used the Web Enabled Academic Support platform for accessing different types of online resources and for interaction with their teachers and peers.

Presently, WEAS hosts about 31 courses/programmes. It also facilitates the students of the programmes with large enrolments like the BSCG programme of the School of Sciences. It caters to the learning needs of thousands of learners and has a pool of learning resources including links to available virtual labs. The WEAS portals also host the recorded sessions of web-counseling conducted for various programmes by the faculty members. The innovative features of the WEAS scheme are given below:

- *One Stop Facility for different types of Teaching-Learning Material:* Provides one-stop access to self-learning material in pdf or e-book form, PowerPoint Slides & handouts, interactive e-learning content, etc.

- *One Point Access to the Supplementary Learning Resources:* Provides access to various kinds of Programme related other learning resources like articles, audio-video resources, YouTube Videos, useful websites, libraries, journals, etc.

- Multi-Media Supported Online Web Counselling: Online web-based video counselling and recorded Video sessions are provided on a regular basis

- *Online Interaction Among Students:* Enables online interaction among students through discussion forums, web conferencing, chat, blogs, bots, e-mail, etc. Students of WEAS are in direct contact with their teachers and fellow Students

- *Continuous Online Assessment Facility:* Enables online formative assessment through quizzes, online tests, games, and other online activities with a possibility of peer assessment.

- *Online Updated Single Window Information System:* Provides different types of online information to the students related to curriculum, important dates, announcements, IRC, Gyandhara/ Gyanvani and Gyan Darshan, important downloads, etc. at a single portal.

- *Cost Effective and Easy to Use Technology:* Highly cost-effective and developed by using the low-cost simple technology G-Suite for Education. No need for any additional infrastructure for hosting and implementation of WEAS portal.

It is easy to be handled and maintained by the Programme Coordinators. They can create a One Stop Portal for their Programmes, administer their courses with confidence, collaborate with other experts anywhere, manage their students with ease, communicate and interact directly with students, and manage all kinds of tasks and activities pertaining to the teaching of their programme.

For developing the WEAS portals for various programmes, the concerned Programme coordinators are imparted training, and they are empowered to develop and maintain their WEAS portals with the help of NCIDE. Presently, WEAS facility has been developed for 31 programmes and about 23 more programmes are in the process to offer technology-enabled learning and teaching through WEAS and many more are at the proposal stage.

This no-cost innovative scheme has very effectively utilized the existing technology in innovative ways for providing effective teaching, learning, and support to distance learners as envisioned in NEP–2020. It can be easily replicated for any number of programmes in the Higher Education Institutes to implement the NEP–2020 provisions. Because of its inherent learner-friendly features this experiment is now in the process of being extended to the Regional Centres of IGNOU to increase access and support to the learners.

Web-based Video Counselling

As recommended by the NEP–2020, IGNOU has harnessed the potential of ICT to strengthen faculty-student interaction through Web-based Video Counselling. In this context, NCIDE experimented with exploring innovative ways to provide web-based video counseling from IGNOU HQ to the students of low enrolment programmes using free and easily available cost-effective, student and teacher-friendly ICT tools. It was found that conducting Programme induction meetings and providing full programme support by conducting course-wise live streaming

sessions and 2-way video-based interactions with the learners left an impact on the learners.

A cost-effective web-based video counseling system was also developed by using the freely available tools innovatively and Web-Based Video Counselling facilities were initiated for the low enrolment programmes as well as for any distance mode programme of IGNOU. The teachers were facilitated to deliver the content innovatively using web-based video counseling to the learners of their programmes .

As another innovative experiment, remote Web Based Video Counselling was conceptualized and initiated by the NCIDE. The experiment aimed to provide teachers with the facility to conduct web-based video counseling anywhere, anytime. It is also worth mentioning that the Certificate programme in Visual Art-Painting (CVAP), Certificate Programme in YOGA (CPY), Certificate Programme in Visual Art–Applied Arts (CVAA), Certificate in Performing Arts – Hindustani Music (CPAHM) programmes are practical oriented programmes and the web-based video sessions were highly appreciated by the students. 60 Multimedia presentations for 40-50 minutes long web counseling sessions were designed and developed. Technical Coordination of more than 150 live sessions and development of approximately 300 image flyers and video flyers of the web-based counseling session was undertaken to promote the use of technology in remote teaching. Now, this initiative has become a regular feature for all most all the limited enrollment Programmes of IGNOU and has proved to be a very effective, interactive and learner-centric means of imparting low-cost quality counselling at a distance.

Such kind of low-cost learner-friendly applications of the technology can be easily used in other Higher education institutions of conventional system along with face-to-face classroom teaching. The NEP–2020 has also suggested practicing the blended mode of teaching-learning for enhancing access, quality and equality in Higher Education.

Empowering Faculty and Students for Innovation and Startups

As recommended by the NEP–2020, the students and faculty need to be empowered and encouraged towards innovation, entrepreneurship and startups. Empowering faculty for innovative use of technology

has also been emphasized by the Policy. Accordingly, IGNOU has organized several training workshops for students on Innovation and Entrepreneurship covering various topics like Problem Solving, Ideation, Design Thinking, Creative Thinking, Pitching an Idea for Startup and IPR Issues, etc. A number of training workshops have been organized for the capacity development of the faculty towards innovative use of ICT in teaching, learning and learner support as suggested in NEP–2020. One such very unique initiative is to impart online training to all the teachers of the Higher Education system on the effective implementation of the NEP–2020.

Empowering Students for Innovation and Entrepreneurship

In order to empower and guide the interested students, IGNOU organized several training workshops such as Student Empowerment for Entrepreneurial Development (SEED), Problem-Solving and Ideation, Inspiration and Motivation for Ideation and Entrepreneurship, How to Develop a Business Plan, etc. through virtual mode for selected students of IGNOU. Through these workshops and training programmes, the students were sensitized and motivated toward Innovation and Entrepreneurship. The aim was to encourage them towards Innovation, Entrepreneurship and Startup; to make them aware of problem identification and ideation to find innovative solutions; and to guide and mentor the students to take their ideas further to convert them into Startups. Through these workshops, the students learned about the process of problem-solving and ideation, Design Thinking, Creative Thinking, Pitching an Idea for Startup and IPR, Business Model Canvas, etc. As a result of these programmes, a number of IGNOU students and alumni are coming forward to set up their enterprises and startups in different fields.

Empowering Faculty for Use of Technology for Teaching, Learning, and Support

NCIDE at IGNOU has been conducting capacity-building training programmes through virtual and face-to-face modes to train and empower the faculty and academics of IGNOU to use the various freely available ICT tools innovatively for teaching and supporting learners. The basic objectives of the workshops have been to impart skills to the faculty to customize and use ICT tools to reach out to their learners and provide them technology-based academic support in innovative ways. The various training

programmes covering topics such as Innovative ways of Developing Multimedia, Enabling the Faculty to Design and Develop WEAS for their ODL Programmes by Using Easily Accessible ICT Tools Innovatively, and Innovative Ways of using Advance Live Video Streaming, etc. have been organized. These programmes have helped the programme coordinators to connect to their students and provide them with various kinds of learning support by using technology.

In-built Component of Innovation and Entrepreneurship in Programmes

As suggested in the NEP–2020, an in-built component of creativity, innovation and entrepreneurship in different programmes can help to generate awareness and encourage students towards innovation and startups. A 2-4 credit course may be developed as a compulsory part of different courses covering the topics like the importance of entrepreneurship, problem-solving and ideation, design thinking, creative thinking, pitching an idea for a startup and, business plan development, and IPR etc.

Virtual Training Lounge

The Virtual Training Lounge is a platform developed by the NCIDE for the trainers and the trainees to sustain their teaching-learning experience. After different training workshops, follow-up guidance and handholding are provided to the participating teachers and faculty to work further on the technology covered in the workshops. The VTL is designed to provide not only synchronous training, but also to sustain the learning experience of the trainees online. The VTL can be accessed through personal mobile phones also. The ease of access to the VTL, anytime from anywhere, makes it an ideal platform for training and its sustainability.

Networking and Collaboration

NEP–2020 envisions that a robust Industry-Academia linkage should be established to promote innovation and entrepreneurship in the HEIs. A network of innovators and mentors both internal and external from academia and industry may be created to support the students and faculty. In this regard, IGNOU has taken several initiatives to network with other institutes and agencies. IGNOU has very successfully implemented a number of schemes initiated by the Ministry of Education aimed at promoting innovation and startups in HEIs.

Mentor-Mentee Scheme of MIC

IGNOU joined the Mentor-Mentee Scheme of the Ministry of Education's (MoE) Innovation Cell (MIC) as a Mentor Institute. The objective of the Mentor-Mentee scheme for IIC institutions is to engage high-performing IIC institutions, especially those who have secured good star ratings during the previous calendar year, to act as mentors to the selected IIC Institutions, who need guidance and support. This mentoring program aims at helping IIC institutions to facilitate knowledge exchange and resource mobilization between institutions by offering inter-institutional collaborations. The scheme is designed to mentor 5 mentee IIC institutes by one mentor Institute. Accordingly, IGNOU was assigned to mentor five other mentee IICs which included the University Institute of Engineering and Technology (Kurukshetra University), Haryana; Shaheed Rajguru College of Applied Sciences for Women (Delhi University), Delhi; BAM Khalsa College, Garhshankar, Punjab; Jagan Institute of Management Studies, Delhi and Desh Bhagat University, Mandi Govind, Punjab. Under this scheme, IGNOU as the Mentor IIC conducted various activities such as orientation cum vision building and mentoring sessions for all mentee institutions, quarterly progress review meetings, I & E exposure visit-cum-training programme, progress monitoring and impact measurement visits to the Mentee IICs by the Mentor IIC. This scheme has not only empowered the students and faculty of the mentee institutes towards innovation and startups, but it has also helped in collaborative learning from each other.

IGNOU Institution's Innovation Council (IIC)

In order to systematically foster the culture of innovation within the institution, IGNOU established the Institution's Innovation Cell (IIC) on the recommendations of the Ministry of Education. The primary mandate of IIC is to encourage, inspire and nurture young students by supporting them to work on new ideas. The IIC at IGNOU was established on October 15, 2018, and is reconstituted every year to bring new and enthusiastic Innovators from faculty, students and external experts. At present, the IIC has been reconstituted to IIC 5.0. The term of the Council is for a period of one year from the date of issuance of the Notification. The council consists of teachers

and academics from various Schools, Divisions and Regional Centres as members and coordinators of various activities. There are external experts from incubation centers, lead investors, industry and IPR, as members and student members of IGNOU. The IIC at IGNOU has been actively involved in conducting activities related to Innovation, Entrepreneurship and Startups from time to time. These activities include IGNOU Idea Competitions, National Innovation Contest, Popular Talks on Innovation and Startups, Online Webinars, Virtual Workshops, business plan competitions and motivational story talks for students and faculty members at both the headquarters and IGNOU Regional Centres. During 2021-22, IGNOU-IIC organized 105 activities and events in the field of innovation, entrepreneurship and startups. For organizing various kinds of activities to promote and support innovation, startups and entrepreneurship in the university, IIC at IGNOU was awarded five stars in 2020 and four stars rating in 2021 as one of the top performers by the Ministry of Education's Innovation Cell (MIC). IGNOU-IIC scored 100% for performing the prescribed activities along with the bonus marks for carrying out several additional initiatives towards meeting the objectives of the IIC.

Documentation and Dissemination of Innovations

One of the major recommendations of the NEP–2020 is to document and share the best and innovative practices with other institutes. To facilitate easy reference by scholars, policy makers and other stakeholders, IGNOU documents and disseminates the policies and good practices on innovations in distance education in the entire ODL system in the country and abroad.

To share and disseminate innovative ideas and innovative practices, the IGNOU brings out a monthly e-Newsletter on innovation named 'Ennovate'. The newsletter includes articles on innovation creativity, entrepreneurship and startups by the IGNOU faculty and eminent experts,; reports of various innovative initiatives in the university; motivational stories of innovations and startups by IGNOU students. The e-Newsletter is disseminated among the various stakeholders of the ODL system through IGNOU website and social media. This initiative motivates other faculty and students towards new and innovative experiments.

In addition to it, IGNOU has brought out other important documents, reports and books on innovations and innovative practices in the university.

Some of such books and documents include 'One Decade of Innovations @NCIDE', 'Creative Sparks of Innovations', 'A Collection of Innovation and Ideas in Open and Distance Learning System', and Innovations in Open and Distance Learning for Quality Education. The book on Innovations in Open and Distance Learning for Quality Education contains the experiences and innovations of the practitioners in the ODL system across India. This book discusses the innovative initiatives taken in various areas of the ODL system in view of the NEP–2020 such as curriculum development, use of technologies in instructional design, learner support, evaluation, and more. This kind of documentation will not only be useful to the teachers of the ODL system, but also to those from the conventional system, and to the researchers, students, policymakers and other stakeholders interested in innovations in education.

Recently, IGNOU has formulated the Institutions Innovation and Startup Policy. This policy based on the National Innovation and Startup Policy is aimed at streamlining and strengthening the activities and programmes undertaken by the university to promote and support the innovation and entrepreneurship initiatives for the students and faculty.

Conclusion

In a nutshell, it can be said that the IGNOU has implemented several provisions of the NEP–2020 in context to innovation, entrepreneurship and startups by setting up a Virtual Incubator, formulation of Innovation Ecosystem in the University, and creating industry-academia linkages through Institutions Innovation Council, Mentor-Mentee Scheme of MIC, Online Discussion Forum of Innovators, and Whatsapp Groups like Potential Startups@IGNOU and Mentoring for Potential Startups. IGNOU has also created hand-holding mechanisms through IGNOU Udyami, Idea to Startup and various schemes and initiatives for promoting innovation among student communities. In order to recognize innovators and entrepreneurs various schemes such as annual Student Innovation Awards, Innovative App Development Challenge, Idea Competitions, Business Plan Competition, Smart IGNOU Hackathon, etc. are being organized from time to time. To foster the culture of innovation across the university, other innovative initiatives have been taken up such as weekly Facebook live Sessions on Innovation and Startup, Sharing Stories of Innovations and Startups, Formulation of IGNOU's

National Education Policy—2020: Philosophy of Curriculum Development[#]

Srinivas K Saidapur*

Quality of education depends on several factors like faculty, curriculums, infrastructure, and fiscal resources to sustain these. All these are equally important. Here, I focus on the very philosophy of curriculum development in the context of the challenges of the 21st century and the recommendations of National Education Policy-2020 (NEP–2020). The first step in the evolution of curriculums is to properly grasp the context and, the second pertains to content delivery mechanisms. They are two sides of the same coin and hence inseparable. The 21st-century context is unmistakably globalization thanks to the *digital revolution*, a significant part of the fourth industrial revolution (IR 4.0). It generated three major waves. The *first wave* pertains to building the internet (1985-990) and laying the foundation for the online world. The *second wave* (2000-2015) pertains to *'Internet of Things'* (IoT), driven by people, products, and a range of digital platforms (e.g. Google, Amazon, etc.). The ongoing *third wave* is called the *'Internet of everything'* (people, things, services, business, and social hubs, etc.). Following the *third wave* of the internet the world has truly become a global village where all can express freely and influence each other. It has changed the lives of people from being spectators to actors. This has in turn led to global citizenry. In consequence, nations can no longer stand alone in isolation. Also, human life is now built around online activity.

It is now inevitable that our higher education system as a whole addresses issues arising out of such developments never seen before in the history of man. For India and other developing countries now is the most crucial moment in the history of education. One is compelled to realize that higher education is the sole operating system not only to attain global competency but also for the transformation of our own society and ensure its well-being. It includes among other things: reverence for cultural and religious diversities, fights against poverty, achieving gender equality, and, wiping out digital, economic, social, and rural-urban divides. Indeed, a defining moment for change has come in the form of the twenty-first century which is poised to overhaul the education systems around the world.

The ubiquitous connectivity mentioned earlier has enabled entrepreneurs to transform almost all real-world sectors including the education sector. As a result, it demands reinvention of the education sector through a multifaceted approach. It is not enough to focus merely on the curricular content: the focus needs to be on *context* and *community* as well. Furthermore, future education needs to focus on *learning to know, learning to do, learning to live together,* and *learning to be* in a social society. To this, one may add *learning to dare, dare to know,* and *learn to undertake*. Therefore, future curriculums and their delivery have a crucial play role to play in accomplishing the desired goals. The mere transaction of pre-cooked syllabi is to ignore societal purposes. The new curricula among other things, must display global perspectives /global outlook, unforeseen flexibility and focus on international collaborations. In this process, universities have both challenges and opportunities to provide leadership and build a brand name for them. Some (provocative) ideas for curriculum development are discussed here.

Academic Flexibility

a. It involves: i) providing a choice of more subject combinations (conventional and unconventional), ii) open electives and add-on courses, iii) earn-while-you-learn schemes, iv) flexible duration to complete the course, v) provision for switching from one course to another (lateral entry) and other exit-entry options, etc. Equally important is weeding out all nonviable subject combinations.

b. Open electives can be vastly diverse; say courses on English and other demand-based regional and foreign languages (ex: Chinese, Japanese, German, French, etc.), Contemporary

[#]*Source: "Remodeling the Universities" by S. K. Saidapur, Atlantic Press, New Delhi, 2022*
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History, Indian Society, Indian Music, Yoga & Meditation, Psychology, Veda and Upanishads, Eastern philosophy, Journalism, Tourism, Communication skills, Personality Development, Entrepreneurship and Start-ups and so on. Such add-on Certificate/Diploma courses may be run in the evenings. Interested supporting staff, faculty members, and other local populace can also avail the benefit of such courses.

c. Options of lateral entry (from one course to another) can have great consequences. To illustrate the point, a science, arts, or commerce graduate should be able to seek admission for MA in English based on her/his performance in entrance tests, aptitude, and interview. Given an opportunity, physical science graduates (e.g. physics, chemistry, Maths) can excel with their batch mates in the study of Economics. Most science graduates can do well in the broad realms of liberal arts. Hence, such options will go a long way in nourishing the passion of students and also producing experts of global standards.

Planning Course Content and Delivery

a. Deliberation of the content, context, and community with users is desirable before planning a course. Once, these are clear the universities may form a 'network of community' that includes teaching faculty, industries, entrepreneurs, learners, and their long-term linkage. The 'syllabus' of a given paper is not a jumble of some pre-decided number of units chosen randomly. It has to have a beginning and an end covering historical perspectives to the latest advancements in the field with the progressive increase in the complexity of concepts. Likewise, maintaining continuity of thoughts and highlighting the relevance of knowledge gained with day-to-day happenings is important.

b. It pays to sensitize course teachers about the intended objectives of the core and elective papers through discussions, seminars, and lectures by experts on the proposed courses/papers.

c. Ideally, different boards of studies high school, to PG classes should meet at least once to decide the subject-wise progression of subjects and their complexity to avoid redundancies. However, this is not always possible. Therefore, the BOS

that prepares syllabi for higher education should consult syllabi of 10+2 courses before preparing the curriculum for UG/PG courses. In any case, proper sequencing of study topics both within and between different levels is essential to guide the entire education program evocatively.

d. All course papers must include historical developments and advances made in a given field of study giving an overview.

e. Laying emphasis on the contributions of Indian scholars (including those residing abroad) where it is due must be ensured. To give an example, the role of adenosine triphosphate (ATP) in providing energy in cells was discovered by Yellapragada Subbarow. He also developed a method for estimating phosphorus. It is he who developed *methotrexate* a compound used in the treatment of cancer and discovered *aureomycin* and *tetracycline* (antibiotics) and so on. Similarly, Indian physicists and mathematicians have made notable contributions. If we do not inform our students who else will? Therefore, the curriculum should focus on a 'region and country first' approach as practiced worldwide. This will help instil confidence and national pride in the minds of learners as opined by D. S. Kothari, former Chairman of UGC. He said: *"How can we lament the lack of national pride in Indians without first acquainting them with the country's phenomenal scientific achievements in the dim distant past?"*

f. It is desirable to incorporate topics on public health and hygiene, a clean environment, and moral and ethical values in social life, at various levels (schools to varsities).

g. The BOS should invariably write a *preamble* stating clearly the objectives of each course / paper and the expected outcomes.

Integration of Sub-disciplines and Heralding Novel Courses

a. Terminologies such as 'discipline', 'intra-disciplinary', 'interdisciplinary', 'multidisciplinary', 'trans-disciplinary', 'cross-disciplinary', 'add on courses', and 'open electives' are widely used; for an explanation of these terms readers may consult *University News,* 58(18) 4-10 May, 2023. Over the past 50 years consequent to major advances many sub-disciplines have emerged resulting in the creation of new depart-

ments and even institutions (e.g. 'DNA Finger-printing', 'Cell Science' etc.). These are neither independent disciplines nor major subject domains. To illustrate further, 'Biochemistry' cannot be equated to major disciplines like 'Biology' or 'Chemistry'. Likewise, 'Mathematical Modeling' is not a discipline comparable to the discipline of Mathematics or Statistics. Such examples abound. Typically, the fragmentations have helped in making good progress in research in specialized areas. Unfortunately, there is not much crosstalk between those teaching or doing research in various sub-disciplines with the parent disciplines thereby impeding conceptualizations, consolidation, and enrichment of fundamental knowledge of major subject domains.

b. In-depth understanding of a subject requires inputs from different disciplines, sub-disciplines and borderless areas. Rigid boundaries between the cognate subjects and disciplines exist no more. Also, often new understanding originates precisely at the so-called boundary levels. However, understanding the intricacies of any subject domain requires basic knowledge of related disciplines. As an example, 'Biology' has now turned out to be all molecular, and therefore, integration of classical with modern aspects is very much needed (e.g. Classical and Molecular Taxonomy; Classical and Molecular Physiology, Molecular Genetics, Molecular Endocrinology, etc.). In addition, certain components of physical sciences need integration with biological sciences without which the pursuit of biology is incomplete (e.g. biophysics, biochemistry, mathematical and statistical tools, and computer applications and so on). Likewise, integration of 'Geography', 'Geology' and 'Atmospheric Sciences' may be needed to evolve a new course; '*Earth and Atmospheric Sciences*'. To give examples from Social Sciences, the integration of courses like 'Anthropology', 'Sociology' and 'Social work' could lead to *'Human Sciences'* or some other acronym. Similarly, 'Economics', 'Commerce' and 'Business Management call for integration. And, 'History', 'Archaeology' and 'Political Science' can go together. Similarly, the pursuit of regional languages calls for a judicious combination of Hindi, Sanskrit and English leading to a better appreciation of comparative literature and grammar. Separate degrees in sub-disciplines should become unwarranted.

c. Mastering science / social science subjects requires mathematical and statistical rigor but with a difference. For instance, courses like *'mathematics for biological sciences', 'mathematics for physical sciences', 'mathematics for social sciences* will be very useful rather than hard-core maths. This will greatly help in not only data analysis but also evolving models, predicting trends in business, economy, demography, pandemics, etc. Likewise, courses on: *'chemistry for biology', 'chemistry for earth sciences', 'chemistry for physical sciences', 'chemistry for environmental studies'* are needed. The same principle applies to statistical courses. With such novel courses in place, UG/PG courses can get strengthened and also enhance the quality of research.

d. The new curriculums should also provide platforms for honing critical and creative thinking, solving solved and unsolved problems, and making innovations- the chief components of modern higher education.

Creation of New Faculty Positions to Sustain New Courses

Integration of sub-disciplines and borderless areas, introducing new and emerging subject areas may pose challenges in teaching due to the paucity of trained faculty to handle such domains (e. g. 'Systems Biology', Drug designing, Nano-science, etc.). Hence, it necessitates the creation of additional faculty positions with proficiency in newer areas. The curriculum developers need to indicate the required faculty and their qualifications unambiguously.

Regulatory bodies like the UGC need to revisit rules pertaining to the faculty-student ratio for colleges/varsities. There is a need for realistic assessment so that teaching science subjects becomes skill oriented, inspiring, and meaningful. Teaching complex science subjects, especially interdisciplinary domains requires specialists in the field. Therefore, positions of Assistant Professors (*Research and Laboratory*) as many as required for a given subject, over and above the prescribed faculty-student ratio need creation to fully engage in modernizing labs, hands-on training, introducing new exercises periodically, supervising field/project works, group learning, and producing laboratory manuals. Such teachers can be given a running scale with suitably defined efficiency bars. They need not be part of the rat race to publish research

papers. Their primary job will be imparting practical knowledge, and teaching creative learning, critical thinking, and problem-solving. They may also carry out some research if they wish. With such provisions, one can hope to inspire students to acquire skills as well as to become good scientists.

Assessment Procedures

An important aspect of the teaching-learning process is student assessment. In view of the changed scenario, assessment procedures have also to metamorphose. The new requirement is to assess students not merely on the knowledge gained but on their ability for critical thinking, creativity, group learning, leadership qualities, problem-solving, making innovations, and so on to name a few. Therefore, complete clarity is needed on the new methodology pertaining to student assessment. A few representative ideas are given below.

a. Every student must know the assessment processes clearly. Therefore, course curriculums should define the use of both the pedagogies and ways of assessment. This particularly pertains to project-based learning, solving problems, working in groups, participating in seminars and quizzes, etc.

b. The curriculum designers should also foretell the logic to be used in setting question papers and, provide 'model' question papers and assessment procedures keeping in mind that the focus is on learners' competency gained, the ability for innovation, and, not on the ability for rote learning. Therefore, the curriculum may specify assessment processes in detail and also about the minimum number of seminars, quizzes, problem-solving sessions, project works and so on to be undertaken by students in a given semester. Setting question papers needs to be imaginative. It should make students think before writing the answers. If five questions are to be answered, two should be difficult or tricky, two that all students can answer and one for below-average students. Ideally set papers help grade the students automatically. Further, teachers may need training if multiple choice questions are to be used and provision for negative marking for wrong answers. Curriculum developers must address these issues and provide directions.

c. Declaring results solely on the semester-end examination is no more relevant when continuous evaluation is in place. A continuous evaluation of student's performance in tutorials, assignments, project works, seminars, quizzes, creativity shown, and the ability for innovation and working in groups, problem-solving, creative and critical thinking and so on should suffice for awarding degrees. Missing the semester-end examination due to unforeseen causes like accidents, illness, pandemics, hospitalization, and maternity need not cause harm to learners. In such unforeseen situations, based on the overall performance of students (continuous assessment) grades/marks can be awarded. Such provisions need to be specified in the curriculums. A continuous assessment rather than semester-end examination should become a notable thrust of the future Indian education system.

Redesigning Class Rooms

In view of the envisaged and drastic changes in the teaching-learning-assessment processes, the classrooms and labs need redesigning. The curriculum developers should therefore clearly specify the requirements of a given course. These include physical infrastructural facilities, scientific equipment, consumables, Wi-Fi facilities, use of digital technologies, software and hardware, online platforms of learning, MOOCs, various Apps, virtual labs and other facilities with respect to a given course to facilitate their acquisition and installation before the commencement of classes. In short, the curriculum developers should provide clear ideas on redesigning the classrooms and labs needed for the adoption of all new pedagogies.

Closing Comments

Revamping of the curriculum is to pave the way to herald education of global standards compelled by globalization and aspiration for global citizenship. The world is increasingly becoming competitive. Any accomplishment of any country largely or solely depends on the quality of education, and practice of meritocracy. Besides, high moral and ethical values and national pride among its citizens are essential in building the nation. The NEP–2020 addresses these issues but the challenge lies in the implementation of the policy in true spirit. To quote Thomas Alva Edison *"vision without execution is hallucination"*. In any case, the universities need to engage in developing a global standard of curriculum and student assessment process. The three major points

pertaining to curriculum development are shown below:

The curriculums must provide for experimentation, self-up-gradation, innovation, and incorporation of assessment and or outcome-based corrections within an overall program structure from time to time. It should also provide directions for teaching, procurement of human material, redesigning classrooms, and all needed directions (including assessment processes) to help implementation of the envisioned programs.

Short courses on 'Contemporary History, Comparative Literature, International Economy, Constitutional Democracies and, Ethics of Human Rights' and other such courses should form ~25% of the total teaching hours at the graduate level as they constitute important dimensions of education globally. Courses on fine arts are needed for the multifaceted development of personality, nurture of one's passions, and realization of hidden human potential.

It is time for our universities to strive to build brands and reputations that employers value. There is no dearth of (raw) talent in the country. The key to inspiring making innovations lies in the proper education of which curriculum is one chief component. Therefore, understanding the philosophy of curriculum development (context, content, and delivery mechanisms) is crucial.

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Innovation and Startup Policy and Establishment of Patent Facilitation Unit, etc. In addition to this, the promotion of creativity and innovation among students and faculty is also being done through Innovation Club@IGNOU, Innovation Club@ RCs, Festival of Ideas, workshops on problem-solving and ideation, seminars and conferences on innovation and startups. New experiments are being done to carry out innovations in teaching and pedagogy through the Web Enabled Academic Support System (WEAS) and online virtual training platform. The faculty is encouraged for bringing innovation in curriculum, pedagogy, and assessment by enabling them to innovate in particular for the practical-oriented programmes. As recommended by the NEP–2020, the IGNOU faculty are also being empowered for using technology and designing innovative teaching-learning processes by orgainising different capacity development/ faculty development programmes, web counseling experiments, etc. In order to promote creativity among faculty and students, initiatives like Idea Generation through Idea Competition, IdeaBank@ IGNOU and Idea Bank for IGNOU students are being executed from time to time.

As a result of a large number of activities undertaken by IGNOU aimed at promoting and supporting innovation, entrepreneurship, and startup, the university has been ranked number one in the Atal Ranking of the Institutions for Innovation Achievements (ARIIA-2021). Also, IGNOU was awarded 5 Star Rating in 2020, and the highest 4 Star Rating during 2021 by the MOE's Innovation Cell (MIC) for promoting innovation and startups in the university.

The innovation experiments undertaken by the IGNOU to implement the NEP–2020 can be easily practiced by any other higher education institution to contribute towards an empowered society. The HEIs may take up special initiatives to identify the students having the potential for innovation and entrepreneurship. Accordingly, necessary training and empowerment programmes may be organized to support them on a regular basis, as a contribution towards *Atmanirbhar Bharat* mission. In fact, mechanisms to create an Innovation Ecosystem in the HEIs aligning with the national priorities, Sustainable Development Goals (SDGs) and International demand should be given top priority. Efforts should be made to establish robust Industry-Academia linkages to promote innovation and entrepreneurship in the HEIs. Creating a network of innovators and mentors both internal and external from academia and industry may be created to support the students and faculty.

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Postgraduate Education in Seed Science and Technology and its Career Opportunities

Basave Gowda*

Agriculture is one of the most important occupations in India. More than 60% of the population depends on Agriculture and its allied activities. Considering the importance of Agriculture for the development of the country, about 64 State Agricultural, Veterinary Fisheries, and Horticulture Universities; 4 ICAR Deemed Universities: 3 Central Agricultural Universities and 4 Central Universities with agriculture faculty are offering Agricultural education at Undergraduate, Postgraduate, and Ph.D programmes including some Diploma and Certificate Courses. Due to advances in the field of Agriculture Sciences, many Universities offer Master's and Doctoral programmes in different specialisations.

As part of the policy of the Government, the Indian Council of Agricultural Research, New Delhi in collaboration with National Testing Agency conduct the All India Entrance Examination to fill up 30 % of Master's and Doctoral programmes in each accredited University and programme. Further, respective State Agricultural Universities/Central Agricultural Universities conduct separate entrance examinations / utilize the score of the entrance examination conducted by the National Testing Agency of the Ministry of Education, Government of India for filling both Master's/Doctoral seats in the University.

Seed Science and Technology is the new science in Agriculture which deals with seed biology, seed physiology, different classes of seeds and their multiplication, seed certification, seed processing, seed storage, seed quality enhancement techniques, testing, quality assurance, seed marketing, export, seed legislation and advances in seed research etc. The syllabus in the programme is designed to suit both academic and seed industry requirements. Many Farm Universities in India are offering both Masters's and Doctoral degrees.

Postgraduate degree holders in seed science and technology can have a wide scope, both in public and private sectors as Seed Production/Research Officers, Seed Inspector, Seed Quality Assurance Officers, and Seed Marketing Officers both in the public and private organizations involved in the seed business. They can also join as scientists in the ICAR / Other research Institutes and as Assistant Professors in the State Agricultural Universities. Further, a lot of opportunities are available to start one's own business/startup.

In view of the above, brief information on postgraduate programmes in Seed Science and Technology available at different state Agricultural Universities in India are being presented here.

Further, one may visit the ICAR/respective universities' websites for detailed information regarding the latest information on accreditation, course, and mode of examination/procedure for admission/eligibility, etc. Details of the availability of Postgraduate Programmes in Seed Science & Technology at different State Agricultural Universities in India are presented in Table-1.

Table-1: Details of the Postgraduate Programmes in Seed Science & Technology

Sl. No	Name of the university / Institute	At Masters level	At Doctoral level
1	Anand Agricultural University, Gujarat. Ph No. 02692-261310 ● E-mail: registrar@aau.in	-	✓
2	Assam Agricultural University, Jorhat, Assam Ph. No. 0376-2340008 ● E-mail: registrar@aau.ac.in	✓	-
3	Chandra Shekar University of Agriculture and Technology, Kanpur Uttar Pradesh Ph. No. 05122-533791 E-mail: registrar@csauk.ac.in, rsingh.csau@gmail.com	✓	✓

* Registrar, University of Agricultural Sciences, Gandhi Krishi Vigyana Kendra, Bengaluru – 560065. E-mail: registraruasb@gmail.com

Sl. No	Name of the university / Institute	At Masters level	At Doctoral level
4	Chaudhuary Charan Singh Haryana Agricultural University, Hisar, Haryana Ph. No. 01662-234613 ● E-mail: regi@hau.ernet.in	✓	✓
5	CSK HPKV, Palampur, Himachal Pradesh. Ph. No. 01894-230383 ● E-mail: registrar@hillagric.ac.in	✓	-
6	Dr. Rajendra Prasad Central Agricultural University, Pusa, Samasthipur, Bihar Ph. No. 06274-240239 ● E-mail: registrar@rpcau.ac.in	✓	-
7	Dr.Y.S. Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh. Ph. No. 01792 -252219 ● E-mail: registrar@yspuniversity.ac.in	✓	✓
8	IARI, Jharkhand Ph. No. 079032 30547 ● E-mail:	✓	-
9	ICAR- Indian Agricultural Research Institute, New Delhi, Ph. No. 011-25842390, 25846536 E.mail: registrar_academic@iari.res.in, dean@iari.res.in	✓	✓
10	Junagarh Agricultural University, Junagadh, Gujarath Ph. No. 0285-2672346 ● E-mail: registrar@jau.in	✓	✓
11	Kerala Agricultural University, Thrissur, Kerala. Ph. No. 0487-2438011● E-mail: registrar@kau.in	✓	-
12	Mahatma Phule Krishi Vidyapeeth, Rahuri, Maharastra. Ph. No. 02426-243226 ● E-mail: registrar.mpkv@nic.in	✓	✓
13	Orissa University of Agriculture and Technology, Bhubaneswar, Orissa. Ph. No. 06742-397424 ● E-mail: registrarouat@gmail.com	✓	✓
14	Prof. Jayashankar Telagana State Agricultural University, Ajendranagar, Hyderabad. Telagana. Ph. No. 0402-4002314 ● E-mail: regrpjtsau@gmail.com	✓	✓
15	Sardar Vallabh Bhai Patel University of Agriculture and Technology, Modipuram, Uttar Pradesh. Ph. No. 01212-2888525 E-mail:brsingh2000@gmail.com, registrarsvpmeerut@gmail.com	✓	-
16	Sher-e-Kasmir University of Agricultural Sciences and Technology, Srinagar (Jammu and Kasmir) Ph. No. 0194-2461271● E-mail: registrar@skuastkashmir.ac.in	✓	✓
17	Tamilnadu Agricultural University, Coimbatore, Tamilnadu. Ph. No. 0422-6611201 ● E-mail: registrar@tnau.ac.in	✓	✓
18	University of Agricultural Sciences, GKVK, Bengaluru, Karnataka Ph. No. 080-23330984 ● E-mail: registrar@uasbangalore.edu.in	✓	✓
19	University of Agricultural Sciences Dharwad, Karnataka Ph. No. 0836-2214420 ● E-mail: registrar@uasd.in	✓	✓
20	University of Agricultural Sciences, Raichur, Karnataka Ph. No. 08432-220157● E-mail:registrar@uasraichur.edu. in	✓	✓

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2. AIEEA Online Counseling Brochure - ICAR's AICE – JRF/SRF (Ph.D) - 2022   ❑

The Tribal Journey: Significant for Liberal Arts Programme Students

Gaurav Srivastava*

The Liberal Arts Programme is a unique opportunity for experimentation. The students enjoy the course because of several reasons, firstly, it's outside their domain of study, yet, connected metaphorically, with allied, supportive information and directions for inquiry. Secondly, there's always the element of unpredictability, and a likelihood of the unknown being drawn into the dialectic – which could belong to then or now or even a maybe, perhaps might someday, or never – an impossibility worth discussing anyway. Thirdly, it's a means to connect dots and build superstructures of knowledge that can add to their visual, intellectual, and argument repertory.

Faculty have their interests as well. They are relieved of the burden of having to know more and enjoy the process of discovery at the same pace as a student, collaboratively. As mentors, they can grow the complexity of inquiry, cross reference media, contexts, ethnicities, belief systems, and every other constraining factor that they see as irrelevant. Thirdly, they wield the shared power of germinating ideas and expressions without a preconceived agenda, target, or previously set expectations. And lastly, it's great to conduct courses that are unlikely to have boundaries, the goalposts can shift at will, and the threshold for every beginning is like a suspended midair magic carpet.

One of the interesting twists for this course was its rootedness in the real world while having the luxury of interpreting the word 'tribe' in multiple ways to define – social groups that converge to identify with an idea, communities that share faith and belief with a common system, or people in general who have a similar story to tell. This conflict between the matter-of-factness and the metaphorical open-ended associations made this course, special, challenging, and fun.

Our Tribal Journey: Exploring Belief System and Identity

During our journey, we embarked on a quest to understand various groups that we consider tribes, generally speaking. Our primitive, aboriginal peoples living across the world were our first pieces of conversation. Their way of life as we know is rich, and the legacy of the rituals they practice are unique, yet simple. Interpersonal relationships that bind them, and how some gravitate to become closer-knit groups to satisfy functions.

All these uniquely different equations are passed down through generations, shaping their belief systems and many other such systems of civility and culture, language and expression, behavior and social codes, food and festivity, and so on. The class aimed to answer fundamental questions of why certain people are classified as tribes and why we find them captivating and what piques our interest in them, constantly.

Unveiling - The Unknown

Thoughts are often influenced by the information and knowledge we receive through different media, prompting us to act as a response to that specific persuasion. To understand our own way of looking at our people was a great way to start reconfiguring our sensitivity. In our in-class exploration, we delved into the world of the *Aghoris*, a cult tribe, through videos and articles. Their rituals and belief system appeared archaic and unimaginable to us, from our worldview of a so-called 'cultured society.' We were also surprised by the *Aghoris* claim that they are able to predict the future and seek "*Moksha*." All of these amazing nuances kept us mesmerized, and left us perplexed about our own notions of existence as we commonly, continuously chase our never-ending aspirations, satisfying our endless desires, engulfed in stress and anxiety.
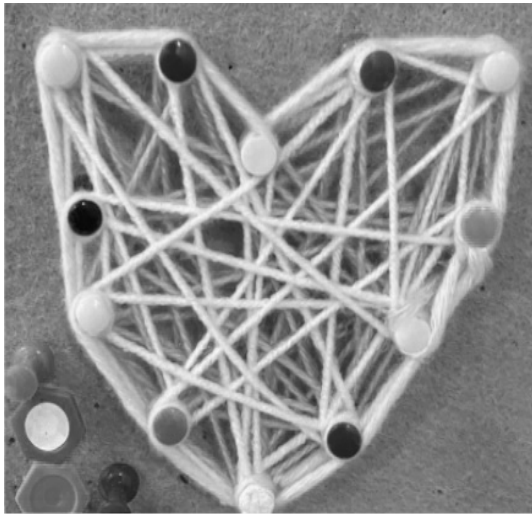
Product Design Inspired by Matrix

This tangible object in Figure -1 indicates the definition of a tribe. There are a lot of strings tangled together representing people who are looped and are doing the same thing again and again hence being stuck in the matrix. These people in the matrix are one and therefore a *Tribe*.

Psychedelic Subculture

The next steps of our journey also involved

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Fig-1: Matrix Model of Defining a Tribe

Artwork by: Deep Tambde

analyzing psychedelics as a tribe. To unpack the sensibilities of communities further and that too despite being considered a subculture and remote. We sought to figure out identifiable iconography of groups sharing common sets of beliefs. By immersing ourselves in their art, music, and culture, we discovered elements that have borne their image and identity through generations and centuries, timelessly. Preserving elements that have continued to remain bold, progressive, captivating, and beautiful even today.

Artwork inspired by the Pop Art Movement

Figure 2 indicates the artwork inspired by the Pop Art Movement. Elements of the art include optical illusions, surrealism, and repetition.

Fig-2: Pop Art Depiction of a Tribe

Artwork by *: Vrinda Kumar*

Polynesian Culture

Our next discussions moved forward towards a contemporary milieu - attempting to understand representations and cultural perceptions of the word 'tribe' and the stereotypes that keep manifesting in popular media – cinema. We drew inspiration from Disney's popular film, Moana, which is played out in the backdrop of an ancient Polynesian civilization. This culture was supposedly equipped with the skill of studying stars for navigation, developing the ability to memorize wave and cloud patterns, and determining their proximity to land based on these formations. The perspectives and opinions that were shared helped create several interesting arguments and possible hypothetical deductions such as – 'Could this ancient wisdom have influenced the creation of tools like Google Maps?' and so on.

Rabari Community

In this interpretation, the term *"Tribe"* is being used to describe a community of artisans who share a common cultural identity based on their unique artistic skills and craftsmanship.

These Indian artisans are known for their exceptional talent and ability to create beautiful works of art by hand, which has earned them the distinction of being referred to as a tribe. The use of the term highlights the importance of recognizing and celebrating cultural diversity and the many different ways that people come together to form communities based on shared values and practices.

Figure 3: Rabari Community

Photograph by :Meha Shah

Figure: 3. The Thelewale (s)

Photographed by : Anoushka Makkar

The Elite and The Thelewalas

And finally, we also examined the tribe of the ultra-rich, capable of acquiring anything money can buy. Their characteristics were obvious and attribute predictable, as most students could closely connect with the urban reality of opulence and luxury. The class reviewed the depiction of this commune and their contexts in movies like "Sex and the City." The elite and wealthy have become iconoclasts of fashion and symbols of brand obsession, captivating the fascination and imagination of women and young girls, worldwide. In a similar vein of typical representation, we see a depiction of the *Mafia,* dressed in black and armed with top-notch weapons, portraying a sense of power and being above the law, glorifying criminals' behaviour and edifying acts of crime. TV series like "Money Heist" has mesmerized audiences, blurring lines between what is wrong and unacceptable socially on paper and appearing

Artwork by: Ayona Deb

morally right and ethical in reel life. The other Tribe commonly found in Mumbai is the *Thelewale(s)* ie., a Tribe of "Roadside Vendors" across the city of Mumbai. The images in Figure 3, clicked with the expressions of intent representations of the tribe as a core idea) alongside, explaining their thought process. Images represent a stark contrast with the "*Elite*".

Conclusion

A wall hanging piece in Figure 4 is entirely designed with nature's ingredients (apart from the paint) to remind us how nature helped us, build us.

In conclusion, over the four chapters of our inquiry of deconstruction and analyses, we came to decipher the world of interpretations of the world – 'Tribe' and the many ways we find a sense of resonance, belonging, and connections thriving together. The significance of finding a common purpose in our lives that binds belief was evident, and identifying with a particular converging belief system inspires, motivates, and at times, makes us feel valued and respected. Reflecting on how the human mind acknowledges and coincides information to fit our shared sensibility of humanity, we realized how we are all a part of some notion of 'tribe' within all of us, providing us with a sense of acceptance and a feeling of community – as social al motif, in cultural celebrations, of political preferences and in individual orientation as persona as well.

This culture was supposedly the first to study stars for navigation, developing the ability to memorize wave and cloud patterns, and determining their proximity to land based on these formations. ❑

The Association of Indian Universities

The Association of Indian Universities (AIU), is one of the premier apex higher education institutions of the Country established in 1925. It is a research-based policy advice institution to the Government of India in the field of Higher Education, Sports, and Culture. Since its inception, it has been playing a vital role in shaping Indian higher education. Most importantly, AIU is vested with the power of according equivalence to Degrees/Qualifications offered by the universities across the world with those offered in India. AIU has also been mandated by the Department of School Education, Ministry of Education, Government of India to accord equivalence to the Indian Boards for the Secondary/Senior Secondary Examination vide Gazette Notification. AIU is a think tank body with the responsibility of undertaking academic activities such as: conducting Research Studies in higher education; acting as the bureau of information on higher education; liaising with international bodies and universities for the internationalisation of Indian higher education among many others. AIU conducts inter-university sports and cultural events at national and international levels. As a National Sports Promotion Organization (NSPO) it promotes sports among Member-Universities and maintains the standards in sports.

Being an apex advisory institution, it constitutes an integral part of all major decision-making committees and commissions in the country. As a representative body of Indian universities, it facilitates cooperation and coordination among Indian universities and liaises between the universities and the Government (Central as well as the State Governments) and also National and International bodies of higher education in other countries in matters of common interest. Whereas all the Indian universities benefit from its contribution, at present it has a membership of about 898 universities including 14 overseas universities from other countries viz. Bhutan, UAE, Kazakhstan, Mauritius, Malaysia Nepal, as Associate Members.

Some of the legends among many, who served AIU as its Presidents are Dr. Sarvepalli Radhakrishnan, Dr Zakir Hussain, Dr. Syama Prasad Mukherjee, Dr K L Shrimali A.L Mudaliar, Dr Akbar Hydary, Prof A C Woolner, Pandit Amarnath Jha, Sir Maurice Gwyer, Dr K L Shrimali, Prof Shiv Mangal Singh 'Suman', Prof M S Gore, Prof M S Adiseshiah, Prof M S Valiathan.

Career Making is Doing What We Love for a Living

Anish Shah, Managing Director and CEO, Mahindra & Mahindra Ltd. delivered the Convocation Address at the Annual Convocation Ceremony of the Bharatiya Vidya Bhavan's S P Jain Institute of Management and Research, Mumbai on May 14, 2022. He said, "You faced various challenges, battled adversities, and adapted to the circumstances. This has made you stronger. You graduate today with the power of this degree and with your aspirations. Each of you has to find your own balance. Your career is not a race or a competition, life is much more than that. Make your choices wisely." Excerpts

Today is your day. All of you have accomplished a lot already. Your academic record or experiences or unique skills enabled you to gain admission to SPJIMR, one of the most prestigious institutions in the country. You are a special batch as the majority of your 2 years were during the pandemic. You faced various challenges, battled adversities and adapted to the circumstances. This has made you stronger. You graduate today with the power of this degree and with your aspirations.

As you embark the next phase of your journey, my mind wanders back to 30 years ago… the time I completed my MBA, the dreams and aspirations and the lessons I learned from my journey over these past 30 years.

Let's Start with Dreams

"You are never given a wish without also being given the power to make it true … you may have to work for it, however".

These are Richard Bach's words, from his book "Illusions", they have stayed with me all through this journey, I will admit it took many years for me to fully understand the meaning.

To make dreams possible, you have to start with a dream. My dream started taking shape when I was in 8th grade. I was visiting my cousin and her fiancé at IIMA. I fell in love with the campus and knew that I had to go there. There was a special bond, as my parents met on that campus, my father was in the 1st batch that graduated from IIMA, my mother was in the second batch (one of the 2 women in her class). That was only the first step, the dream was to be the India CEO for a multinational company before the age of 40. It was influenced by my father's career. It led me to seek experience in the US, eventually to return as CEO of GE Capital India at the age of 39.

It was a wish … I realized over time that I had the power to make it come true … you have the power to make your dreams possible. You may have to work for it, however …

Innovation

As I think about the work I had to put in to make my dream possible, it could be summed up in one word … Innovation.

What is innovation … for me, it is the willingness to learn, the determination to keep trying and the focus on tangible outcomes … at both the personal and professional level.

Innovation is about the willingness to learn … I'm here today because of everyone who has coached and guided me.

My parents, who kept pushing me to do better. My wife, who always reminds me that I should understand people's feelings and build relationships. My sons, who taught me that to gain control, one had to give up control. A special person, Anand Mahindra, who has taught me how to bring out the best in people *(I'm still learning)*. And, my bosses over the years, who often told me "you're really bad at this".

One instance was very early in my career, in my first year at Bain. My manager and I were driving back to the airport after a client meeting and he said … "Anish, you add no value in meetings … you know a lot, but you don't talk much". He then gave me a very good suggestion, to use the whiteboard as a tool as it enabled me to take charge and structure the discussion. That made such a difference.

There were many such occasions. I was really bad at a lot of things. And, fortunate to have bosses who were direct enough to say it so directly. Their feedback was brutal, but I welcomed it. The willingness to learn has made me who I am today.

Innovation is about determination. During my Ph.D., I had developed a stock exchange game, where students played the role of CEOs and stock

market traders. I had to create a computer network that could simulate a stock market in 1994. And, as a B. Com graduate with an MBA, I didn't know much about coding. So I got some computer books, learned coding and spent countless hours in the computer lab … it didn't work … I would stay in the lab all night to find the problem … as I just did not know how to give up. The game was created and used to teach courses in corporate finance. Students got grades based on how well they played the game *(I'm sure you'd love that)*. Many professors at Carnegie Mellon came to see this networked game, including the recently retired President of the university, who took me under his wing. That experience was a defining moment … it taught me that anything is possible … if you're crazy enough to keep trying again and again. Determination.

Innovation is about tangible outcomes. At Mahindra, I'm continually amazed by our teams. There is a culture of innovation that stems from our Rise philosophy. It starts with accepting no limits. Our head of Auto Product and Technology wanted to build an SUV that was better than BMW. And, at the Mahindra Research Valley in Chennai, he created the XUV700, a truly amazing vehicle and one that is certainly worth of a comparison with BMW. As I'm biased, will leave you to judge for yourselves whether it is better. I'm any case, we got 50K bookings in 3 hours … a $1B in 3 hours … a global automotive record. Our Real Estate business has recently launched India's first NetZero residential community, which was sold out in 3 days.

It is not just about products and projects. Over the years, at the start of every role, I would think about what I should leave behind.

While moving out of any role, if you can clearly articulate the value you've created, you've achieved something. If others can articulate the value you've created, the value is real. And, if 3 years later, others remember that "this is what you did in that role you were in", then you will build a strong career. It is about tangible outcomes.

But innovation alone was not enough. There is another factor that played a key role in my journey. It is called … *helping others succeed.*

Helping others Succeed

Early in my career, I was the Sales & Marketing head for a dot-com within GE. For a number of reasons, we recommended to the CEO of the parent entity that the business should be shut down. That evening I called one of the senior leaders of the parent entity. I had met him only once, at a dinner with 20 customers. His response was just amazing, he said "Anish, we will create a role for you, I'm not sure what that is, but you're not going anywhere else". I expressed surprised as he barely knew me. He said "I know you well … you've helped many of your peers and they have been talking about you"

Helping others succeed is counter-intuitive if you think of career as competition … and will result in some painful situations where others take credit for what you did.

I've found this to be very powerful across various roles. There was one role where I did not follow this approach and it did not go well, despite some tangible outcomes. And, many others where helping others succeed built trust and a high level of collaboration that actually helped me succeed.

Conclusion

In conclusion, the one message I'll leave with you is "follow your heart". All my key career decisions were based on following my heart. I found that the most important thing was to love my work … the people around me, the culture, the environment.

As I reflect on my journey, it started with the passion to be someone, to achieve something meaningful *(and I'm sure all of you have that same passion)*. It has been a lot of hard work and a lot of fun … there were many 100 hour weeks and all-nighters. We moved to a new city on average every 2-3 years. And, yes, I feel good about what I've achieved.

What gives me a lot more satisfaction, though, is a choice I made many years ago. The choice to spend weekends with family … my wife and our 2 boys. Today, our boys are now young men, and I feel so glad that I've spent time with them while they were growing up. On most weekdays, they would not see me, but weekends were theirs. That was the most important choice I've made in my life and my career.

Each of you have to find your own balance. Your career is not a race or a competition, life is much more than that. Make your choices wisely. I wish you the very best in your journey and may Richard Bach's words always stay with you:

"You are never given a wish without also being given the power to make it true ... you may have to work for it, however".   ❑

CAMPUS NEWS

Latest Events of Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore

The following are the latest events conducted at the Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore.

National Graduate Physics Examination (Part-C)

The final round of National Graduate Physics Examination-Part C which was organised by the Indian Association of Physics Teachers (IAPT) was hosted by the Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore on June 03, 2023. The National Graduate Physics Examination (NGPE) focused on practical aspects of physics, testing the student's ability to apply theoretical concepts to real-life scenarios. The design of experiments was carefully crafted to evaluate the candidates' scientific knowledge, critical thinking skills, and problem-solving abilities. The experiments covered a wide range of topics, providing a comprehensive assessment of the student's understanding of physics principles. There were four experiments with six sets each designed to conduct the examination.

*Experiment- 1***:** To plot the intensity profile at various distances from the end of the optical fiber and to find the acceptance angle and numerical aperture of optical fiber.

Experiment-2: To Design a regulated power supply using Zener diode to deliver 5.3 V, 30 mA to the load.

Experiment-3: To find the wavelength of the laser using a thin wire A of known thickness and to find the diameter of wire B of unknown thickness.

Experiment-4: To measure the total emittance from four different surfaces and plot the radiated power at different temperatures to validate Kirchhoff's law of thermal radiation.

To guide the candidates through the examination, a comprehensive manual was prepared. The manual contained detailed instructions, guidelines, and information about the experiments, including safety measures. The manual served as a valuable resource for both the candidates and the examiners, ensuring a standardized and consistent examination process.

Dr. Vasant Sathe, Center Director, UGC-DAE, CSR, Indore inaugurated the examination. Dr. Upinder Dhar, Vice Chancellor, SVVV Indore welcomed all the dignitaries and participants. Dr. Dubey, EC Member IAPT provided the audience with insights into the various activities conducted by IAPT-RC-09. Dr. B P Tyagi, Chief Coordinator of the Examination, IAPT delivered a brief overview of NGPE highlighting its objectives and significance.

In the Keynote Address, Dr. Sathe emphasized the importance of scientific excellence and the cultivation of scientific temperament among students. Dr. Uttam Sharma, Professor and Head, Department of Physics, SVVV and Convener, NGPE (Part-C) proposed the vote of thanks to all. Along with the participants, Dr. Santosh Dhar, Dean, Research, SVVV, HoIs and HoDs of Institutions constituted by SVVV, and Academicians from various institutes of Indore were also present in the inaugural ceremony.

Prof. B P Tyagi took a briefing session for the participants. Out of 25 participants, 10 participants were present for the examination. All the participants were divided into four groups to perform the experiments. The Faculty Members of the Physics Department were assigned to oversee the examination and their expertise contributed to the smooth execution of the examination process. Lab Assistants from SGSITS and SVVV assisted the faculty and the students in the execution of the examinations. The external Judges were invited to evaluate the performance of candidates.

The gold medal and a cash prize of 20,000/- winners were Rinku, Panjab University Chandigarh, Heerak Sharma, Indian Institute of Science Education and Research, Pune (MS), Panchajanya Dey, Indian Institute of Science Bangalore, Vivek Gurunath Sabarad, Indian Institute of Science Education and Research, Pune (MS), Sharda, Hansraj College, University of Delhi, Anubhav Srivastava, Indian Institute of Science Bangalore.

UTPRERNA-Understanding the Work of Nobel Laureates – 2022

The *UTPRERNA*, A Nobel Lecture Series on 'The Nobel Prize in Physics-2022' was organized

by the Science Club on May 12, 2023. The faculty members and students from various institutes, SVVV participated in the event. The lecture *'Utprerna'* was delivered by Dr Shweta Mishra, Associate Professor, Department of Physics, Shri Vaishnav Institute of Science. She talked about the work of Nobel Prize winner in Physics-2022, Alain Aspect, John F. Clauser and Anton Zeilinger for their experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science. The session was followed by a discussion.

Dr Upinder Dhar, Vice Chancellor conferred about the future possibilities of research in the field and to motivate students towards research. In the discussion, Dr. K N Guruprasad, Director, Shri Vaishnav Institute of Science told that any experiment is theoretical until it is proven and when it is proven then it is called science. He told the importance of theoretical works. Dr. Uttam Sharma, Head, Physics also shared his knowledge during the discussion and talked about quantum mechanics. The event was conducted by Ms Varsha Pathak and Coordinator, Dr. Asmita Sharma proposed the vote of thanks.

Workshop on National Case Writing and Teaching with Cases

A five-day Online Workshop on 'National Case Writing and Teaching with Cases' was organized in association with the Association of Indian Management Schools, National HRD Network, Indian Society for Training and Development, and Institutions Innovation Council during May 08-12, 2023.

In view of the inadequacy of suitable case literature reflecting Indian situations, the event aimed at developing and publishing case studies for use in teaching and training sessions. The Case Method gained significant importance as an alternative pedagogical tool to the traditional lecture method of imparting knowledge to learners. The event was an attempt to facilitate the faculty members working in various B-schools in India to write management cases based on Indian situations of corporate houses.

The event started with a brief introduction and was followed by online interaction of groups of faculty members with representatives of various organizations. All groups collected the review of information and also learned to draft cases. The

preparation of a second draft copy of cases was carried out by a group of faculty members followed by a case clinic. Here, how to share quality content was discussed by the facilitators. The facilitators discussed teaching cases with all the participants and their queries were solved, accordingly. Participants shared their various experiences while interacting with corporate professionals. The final presentation was shared by each group of faculty members and feedback by the facilitators. After the feedback of participants, Dr. Manish Joshi, Associate Professor, Marketing Area, Shri Vaishnav School of Management, Shri Vaishnav Vidyapeeth Vishwavidyalaya Indore proposed the vote of thanks.

International Conference on Sustainable Energy Sources, Technologies and Systems

A three-day International Conference on 'Sustainable Energy Sources, Technologies and Systems' was organized by the Division of Research and Development, Lovely Professional University, Phagwara, Punjab during August 03-05,2023.

Energy is the backbone of any society for its sustainability. However, sustainability of the society is at risk due to continuously increasing energy demand, rampant use of limited fossil fuels, and their adverse impact on the environment. Burning of fossil fuels creates pollution and increases the temperature of the earth's atmosphere, which eventually leads to unfavorable conditions for food grain, soil fertility, potable water, human health, and inconsistency in the natural processes (e.g. shifting the seasons). As a result, the focus on of the scientific community, politicians, governments, policy and decision makers has shifted to explore and utilize sustainable energy resources, conversion technologies, efficient processes, and systems utilizing energy in a sustainable manner that can ensure the sustainability of society in the future. Recently, significant efforts have been made in different areas for developing and innovating technologies and processes for utilizing fossil fuels sustainably and conversion, utilization of renewable energy sources, preserving water resources, organic farming, food management and security, energy-sufficient architecture, etc. In order to ensure sustainability, developed technologies, and processes are being demonstrated and implemented,

low-cost and highly efficient materials are explored, promotional policies are developed and new capacity-building programs are offered. The progress and developments in the listed areas are required to be shared among the global stakeholders for speedy replication, progress, and development and to ensure the sustainability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend. The aim of the conference is to bring all the stakeholders of sustainable development and climate change to one platform to discuss the progress, achievements, and advancements in processes, methodologies, techniques, technologies, policies, education, and governances that can effectively and economically contribute in addressing the issues hindering the sustainable development of the society and severely impacting the climate change. The Tracks of the Event are:

Advances in Renewable Energy Conversion Technologies and Processes

- Solar Energy Conversion and Storage Technologies.
- Wind Energy Conversion and Storage Technologies.
- Hydroelectric Power Generation.
- Bioenergy and Geothermal Energy.
- Energy Storage Technologies.
- Smart Grid Systems.
- Efficient Energy Conversion and Integration.
- Integration Of Renewable Energy Sources
- Carbon Capture, Storage, and Utilization.
- Energy Policy and Regulations.
- Ocean Energy.
- Hybrid Energy Systems.
- Energy-Efficient Buildings.
- Microgrids.

Sustainability in Agriculture and Climate Change

- Smart Energy Management.
- Sustainable Agriculture.
- Waste Management
- Water Management

- Smart Cities.
- Sustainable Manufacturing.
- Environmental Monitoring.
- Sustainable Transportation.
- Renewable Energy.
- Ecosystem Conservation.

IoT for Sustainable Development

- 'Smart' Agriculture.
- Monitoring and Reducing Energy Consumption.
- Sustainable Transportation.
- Waste Management and Recycling.
- Sustainable Water Management.
- Urban Planning and Development.
- Disaster Response and Recovery.

Sustainable Materials for Energy Conversion and Storage

- Development of New Materials for Solar Energy Conversion.
- Sustainable Materials for Energy Storage.
- Recycling and Upcycling of Waste Materials.
- Sustainable Materials for Fuel Cells.
- Sustainable Materials for Thermoelectric Devices.
- Biodegradable Materials for Energy Storage.
- Sustainable Materials for Supercapacitors.
- Development of New Materials for Energy Conversion in Catalysis.
- Sustainable Materials for Energy-Efficient Buildings.

For further details, contact Programme Chair and Convenor, Prof. Ravinder Kumar, Professor, Division of Research and Development, Lovely Professional University Jalandhar-Delhi GT Road, Phagwara, Punjab–144411, Mobile No:070092-80678, E-mail: *ravinder.22218@lpu.co.in.* For updates. Log on to: *www.lpu.in*

National Groundwater Conference

A two-day National Groundwater Conference was organized by the Department of Civil Engineering Indian Institute of Technology

Hyderabad in association with the Association of Global Groundwater Scientists during December 05-06, 2023. The conference brings together experts in various interrelated disciplines of groundwater hydrology to share their ideas. The Pre-Conference Workshop on 'Modeling and Management of Groundwater in Fractured Geologic Media' is scheduled on December 04, 2023.

India is the largest user of groundwater in the world, drawing more than 25 % of global groundwater abstraction. More than 85 % of rural water needs, more than 50 % of urban water needs, and more than 50 % of agricultural water needs are exclusively met from groundwater resources. If the current rate of groundwater extraction continues, it may soon lead to an unsustainable balance, and depletion of groundwater levels and quality, leading to poverty and food insecurity in many parts of the country. The themes of the event are:

Hydro-geologic Characterization

Geophysical exploration techniques, Inverse problems in geophysics, Aquifer mapping, pumping/recovery tests.

Groundwater Assessment, Monitoring, and Management

Geospatial applications for groundwater Monitoring and Assessment, Monitoring techniques, application of IoT, and Groundwater management under changing climatic conditions.

Surface Water- Groundwater Interactions

Artificial recharge of groundwater, Effect of irrigation on groundwater levels, Submarine groundwater discharge (SGD), Water budgeting/water audit, Water economics, governance, policies, and capacity building.

Groundwater Modelling and Management

Modeling flow in groundwater zone and vadose zone, Saltwater intrusion in coastal aquifers, Aquifer parameter estimation, Computational methods in groundwater modeling, Groundwater resources and climate change, Availability of groundwater resources under new increasing demands, decision support system and simulation

Fate and Transport of Contaminants in Sub-surface

Groundwater quality monitoring and assessment, Transport of pathogens, emerging contaminants, heavy metals, geogenic contaminants, Contaminants transport modeling, Groundwater chemistry, Remediation of contaminated sites, and Water treatment and recycling of wastewater

Multi-Phase/Density Flow in Subsurface

NAPL flow in groundwater, Multiphase flow in oil and gas reservoirs, Saltwater intrusions in coastal aquifers, and CO_2 Geo Sequestration.

For further details, contact Convener, Dr. K B V N Phanindra, Associate Professor, Department of Civil Engineering, IIT Hyderabad Kandi, Sangareddy—502 285, Telangana. Phone Number: (040)2301-6306, (040)2301-8300, E-mail: *ingwc2023@ce.iith.ac.in.* For updates, log on to: *www.iith.ac.in/.../05/Fifth-Indian-National-Groundwater-Conference.*

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THESES OF THE MONTH

SCIENCE & TECHNOLOGY
A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of April-May, 2023)

AGRICULTURAL & VETERINARY SCIENCES

Agricultural Economics

1. Thaker, Nisha Maheshbhai. **Performance evaluation of regional rural banks and co-operative banks in India**. (Dr S M Trivedi), Department of Agricultural Economic, Junagadh Agricultural University, Junagadh.

Agricultural Extension

1. Bharati, Arvindra Kumar. **A comparative study of knowledge and adoption behaviour of vegetable and non vegetable growers in Bundelkhand Region**. (Dr. Amit Kumar Mishra), Department of Agricultural Extension and Communication, Bhagwant University, Ajmer.

Agronomy

1. Mahanta, Ranajit Kumar. **Formulation of nano Atrazine and its potential effect on maize weeds**. (Dr. N N Gudadhe), Department of Agronomy, Navsari Agricultural University, Navsari.

Biotechnology

1. Patel, Dhartiben Keyurbhai. **Generation of chimeric xylanase and phytase for industrial applications**. (Dr. Gayatri A Dave), Faculty of Applied Science, Charotar University of Science and Technology, Anand.

Entomology

1. Lingappa, Sarukh Prakash. **Management of major insect-pests of cabbage**. (Dr. P R Zanwar), Department of Agricultural Entomology, Vasantrao Naik Marathwada Agricultural University, Parbhani.

Food Science & Technology

1. Razzaque, Mohd Nisar Abdul. **Studies on exploration and quality evaluation of composite flour (Sorghum and Jackfruit seed) based value added food products**. (Dr. A R Sawate), Department of Food Technology, Vasantrao Naik Marathwada Agricultural University, Parbhani.

Horticulture

1. Champaneri, Dushyant Dipakkumar. **Optimization of irrigation water requirement in tomato using soil moisture sensor ET and irrigation model**. (Dr. K D Desai), Department of Vegetable Science, Navsari Agricultural University, Navsari.

2. Pandey, Alok Kumar. **Studies on foliar freeding effect of certain minerals and Ga$_3$ on yield, quality and shelf life of BER *(Zizyphus mauritiana* Lamk) Fruits Cv gola**. (Dr. Abhinav Kumar), Department of Horticulture, Bhagwant University, Ajmer.

Plant Pathology

1. Kendre, Ashatai Hanumantrao. **Epidemiology and management of enation leaf curl disease of Okra (*Abelmoschus esculentus* (L) moench**. (Dr. V M Gholve), Department of Plant Pathology, Vasantrao Naik Marathwada Agricultural University, Parbhani.

BIOLOGICAL SCIENCES

Biochemistry

1. Joshi, Urja Urvishkumar. **In *Silico* and *In Vitro* studies on the role of microRNAs in the infective stages of *Plasmodium falciparum***. (Dr. H N Highland), Department of Biochemistry, Gujarat University, Ahmedabad.

Biotechnology

1. Savant, Amol Ramesh. **Consequences of selected botanicals on aphids (Hemiptera) and cytological investigation of some synthetic insecticides on *Alium cepa* L root tips cells**. (Dr. Sandeep Kumar, Dr. Bhanwar Lal Jat andDr. Anil Sopanrao Wabale), Department of Biotechnology, Bhagwant University, Ajmer.

Botany

1. Kavita Rani. **Micropropagation and antimicrobial studies of viola canescens wall. Ex Roxb: An important medicinal plant**. (Dr. Narender Singh and Dr. Jitender Sharma), Department of Botany, Kurukshetra University, Kurukshetra.

2. Swati Priya. **Phenotyping of Lentil (*Lens culinaris Medik.*) germplasm for drought tolerance**. (Dr. Narender Singh and Dr. Ruchi Bansal), Department of Botany, Kurukshetra University, Kurukshetra.

Life Science

1. Bajpai, Mukul. **Investigation of graywater and clinical wastewater treatment with electrocoagulation: Optimization by response surface methodology**. (Dr. Sujit Singh Katoch), Faculty of Engineering and Technology, National Institute of Technology, Hamirpur.

2. Behl, Rachna. **Recommendation of point of interest for location based social networks**. (Dr. Indu Kashyap), Faculty of Engineering and Technology, Manav Rachna International Institute of Research and Studies, Faridabad.

3. Naresh Kumar. **Studies of genetic variability for qualitative and quantitative traits of some selected genotypes of carrot (Daucus Carota L) cultivated in North Eastern Part of Rajasthan**. (Prof. Amrita Nigam and Dr Akshay Pathak), School of Life Sciences, Indira Gandhi National Open University, New Delhi.

ENGINEERING SCIENCES

Biotechnology

1. Patel, Dishant Utpalbhai. **Eco-electrogenic integrated systems for sustainable bioremediation of textile dye wastewater**. (Dr. Chirayu R Desai), Faculty of Applied Sciences, Charotar University of Science and Technology, Anand.

Computer Science & Engineering

1. Aslam Mohammad. **A study of cross browser compatibility as design issue in different websites and mobile applications**. (Dr. Kulvinder Singh), Department of Computer Science, Tantia University, Sri Ganganagar.

2. Batra, Amit. **Link prediction and recommendation in online social networks and web portals**. (Dr. Sanjeev Dhawan and Dr. Kulvinder Singh), Department of Computer Science & Engineering, Kurukshetra University, Kurukshetra.

3. Bharath, K M. **Design, development and implementation of a framework for contextual analysis and synthesis in human-bot communication**. (Dr. Babu Rao K), Department of Computer Science and Engineering, CMR University, Bangalore.

4. Dar, Khursheed Ahmad. **A framework to enhance QOS for visualization of high dynamic range imaging**. (Dr. Sumit Mittal), Department of Computer Science & Engineering, Maharishi Markandeshwar University, Ambala.

5. Moolchandani, Jhankar. **English language analysis from the scanned document with the use of pattern recognition and machine learning**. (Dr. Kulvinder Singh), Department of Computer Science, Tantia University, Sri Ganganagar.

6. Paramjeet Singh. **Plant leaf disease detection system using image processing with neural networks**. (Dr. Pawan Pareek), Department of Computer Science & Engineering, Tantia University, Sri Ganganagar.

7. Pareek, Brij Mohan. **Image compression using digital wavelet transform with global hard thresholding for storage and security**. (Dr. Amit Kumar Vyas), Department of Computer Science, Tantia University, Sri Ganganagar.

8. Parekh, Disha. **Breast cancer diagnosis and enhanced detection mechanism: On a DICOM based set with machine learning supervised algorithm and enhancing the prediction accuracy by implementing ensemble algorithm**. (Dr. Vishal Dahiya), Department of Computer Science, Indus University, Ahmedabad.

9. Rajput, Sheetal. **Mechanism for secure and efficient routing protocol in MANET**. (Dr. Pushpneel Verma), Department of Computer Science, Bhagwant University, Ajmer.

10. Ratan, Lavanya. **To analysis and development of protocols for clumping in mobile ad hoc networks**. (Dr. Raghav Mehra), Department of Computer Science, Bhagwant University, Ajmer.

11. Shabnam Parveen. **Optimization of web page rank based on aggregation method and PSO**. (Dr. R. K. Chauhan), Department of Computer Science & Engineering, Kurukshetra University, Kurukshetra.

12. Sharma, Nishant. **Improving data availability in internet of vehicles**. (Dr. Naveen Chauhan), Department of Computer Science & Engineering, National Institute of Technology, Hamirpur.

13. Zala, Kritirajsinh Jayendrasinh. **Model for privacy preservation on e-health care data in cloud environment**. (Dr. Hirenkumar Thakkar and Dr. Madhu Shambhu Shukla), Department of Computer Engineering, Marwadi University, Gujarat.

Electrical & Electronics Engineering

1. Rajesh, K. **Multi-objective economic operation of thermal units using heuristic techniques**. (Dr. N Visali), Department of Electrical Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

2. Shah, Owais Ahmad. **Design and analysis of power efficient flip flop and its application in nanometer technology**. (Dr. Geeta Nijhawan and Dr. Imran Ahmed

Khan), Faculty of Engineering and Technology, Manav Rachna International Institute of Research and Studies, Faridabad.

3. Sharma, Pradeep Kumar. **Security enhancement through flow based centralized control in software defined networking**. (Dr. Brijesh Kumar and Dr. S S Tyagi), Faculty of Engineering and Technology, Manav Rachna International Institute of Research and Studies, Faridabad.

Electronics & Communication Engineering

1. Goel, Pooja. **Performance analysis of millimeter wave radio over fiber systems**. (Dr. Rahul Kaushik), Department of Electronics & Communication Engineering, Jaypee Institute of Information Technology, Noida.

Food Engineering & Technology

1. Mane, Rushikesh Pratap. **Studies on formulation, process optimization and quality evaluation of millet based value added food products**. (Dr. R B Kshirsagal), Department of Food Engineering, Vasantrao Naik Marathwada Agricultural University, Parbhani.

Mechanical Engineering

1. Niralgikar, Kirti Hanamant. **Measurement and analysis of wear in top piston ring of four stroke I C engine**. (Dr. Mukesh Bulsara), Faculty of Technology and Engineering, Charotar University of Science and Technology, Anand.

MATHEMATICAL SCIENCES

Mathematics

1. Shekhar, P Raja. **Mathematical modelling on peristaltic transport of Jeffrey fluid flow in Ducts**. (Dr. K Maruthi Prasad and Dr. R Bhuvana Vijaya), Department of Mathematics, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

2. Verma, Priyanka. **Development of some optimal inventory policy with particle swarm optimization techniques**. (Dr. B K Chaturvedi and Dr. A K Malik), Department of Mathematics, Bhagwant University, Ajmer.

MEDICAL SCIENCES

Biochemistry

1. Dhadhal, Shivaniben Kishorbhai. **Bioprospecting Aloe barbadensis Mill. as a possible pre-conceptive agent in polycystic ovary syndrome**. (Dr. Laxmipriya Nampoothiri), Department of Biochemistry, M S University of Baroda, Vadodara.

Biotechnology

1. Banumathi. **Unravelling the complexities of inflammatory neoplasia through effective pharmacophores for therapeutic intervention**. (Dr.B T Prabhakar and Dr. Riaz Mohmood), Department of Biotechnology, Kuvempu University, Shankaraghatta.

Homeopathy

1. Gaur, Bhavna. **To study the efficacy of homoeopathic medicines in polycystic ovarian syndrome**. (Dr. Ruchi Biswas), Faculty of Homoeopathy, Tantia University, Sri Ganganagar.

2. Gupta, Yogeshwari. **Observational study to ascertain the effectiveness of homoeopathy in obesity**. (Dr. Parveen Kumar Sharma), Faculty of Homoeopathy, Tantia University, Sri Ganganagar.

3. Katoch, Tushit. **Efficacy of synthesis repertory in the management of hyperuricaemia in primary Gaut: A single blind randomised controlled study**. (Dr. Anil Vangani), Faculty of Homoeopathy, Tantia University, Sri Ganganagar.

4. Mehare, Shubhangi Arun. **To study the efficacy of homoeopathic medicines in different types of acute diseases**. (Dr. Ruchi Biswas), Faculty of Homoeopathy, Tantia University,Sri Ganganagar.

5. Sontakke, Priyanka Banduji. **Importance of observations as pointers to similimum in paediatric age group under 5 years**. (Dr. Ruchi Biswas), Faculty of Homoeopathy, Tantia University, Sri Ganganagar.

6. Srivastava, Mansi. **Clinical utility of repertory of the homeopathic materia medica by Dr. J.T. Kent in treatment of bronchial asthma**. (Dr. Anupriya), Faculty of Homoeopathy, Tantia University, Sri Ganganagar.

Nursing

1. Barman, Nabanita. **Prevalence of behavioural problems amongst school children and assessment of knowledge of school teachers about behavioral problems in selected primary schools of Baksa District, Assam**. (Prof. Mridula Saikia Khanikor), Department of Nursing, Srimanta Sankaradeva University of Health Sciences, Guwahati, Assam.

2. Bhalla, Chamandeep. **A study to assess the effectiveness of planned teaching programme on self-administration of insulin for patients with insulin dependent diabetes mellitus, receiving insulin through subcutaneous route in selected hospital of Bathinda

District, Punjab. (Dr. Alok Rawat), Department of Nursing, Tantia University, Sri Ganganagar.

Pharmaceutical Science

1. Dar, Mohammad Ovais. **Quantum chemical evaluation and synthesis of NHC containing compounds with possible CC and CN coordination interactions**. (Prof P V Bharatam), Department of Biochemistry, National Institute of Pharmaceutical Education and Research, Hajipur.

2. Diwakar, Sunil Kumar. **Design, synthesis and biological evaluation of novel kinase inhibitors implicated in Alzheimer's disease by high throughput virtual screening**. (Dr. Anoop Singh), Department of Pharmaceutical Science, Bhagwant University, Ajmer.

3. Patel, Salim Gafur. **Formulation developments and evaluation of effervescent dosage for skin whitening**. (Dr. M Siddaiah), Department of Pharmacy, Bhagwant University, Ajmer.

4. Shafiulla, Syed Mohammed. **Evaluation of anti migraine activity and phytochemical screening of some Indian medicinal plants**. (Dr. M Siddaish), Department of Pharmacy, Bhagwant University, Ajmer.

5. Soni, Udit Narain. **Synthesis and evaluation of anti-tubercular, anti microbial activities of some indoline 2,3 dione derivatives**. (Dr. Anoop Singh), Department of Pharmaceutical Science, Bhagwant University, Ajmer.

6. Yadav, Anil Kumar. **Hepatoprotective and antioxidant activity study of some medicinal plants against non-alcoholic fatty liver diseases**. (Dr. Anoop Singh), Department of Pharmacy, Bhagwant University, Ajmer.

Physiotherapy

1. Chatterjee, Subhasish. **Development, validation and reliability testing of stroke specific shoulder disability index**. (Dr. Manu Goyal), Department of Physiotherapy, Maharishi Markandeshwar University, Ambala.

PHYSICAL SCIENCES

Chemistry

1. Chettri, Sailesh. **Exploration of catalytic activities of some transition metal borates for green synthesis of nitrogen containing heterocyclic compounds**. (Prof. Biswajit Sinha and Dr. Dhiraj Brahma), Department of Chemistry, University of North Bengal, Darjeeling.

2. Indu Bala. **Structural, photophysical and biological characterization of some transition metal complexes derived from tridentate schiff bases**. (Dr. Kiran Singh), Department of Chemistry, Kurukshetra University, Kurukshetra.

3. Lovleen Kaur. **Theoretical investigations into adsorption and sensing properties of armchair graphene nanoribbons**. (Dr. Sangeeta), Department of Chemistry, Kurukshetra University, Kurukshetra.

4. Patel, Nidhi Navinbhai. **Surface active ionic liquid: Synthesis, characterization, and application**. (Dr. Sanjay Panjabi), Faculty of Applied Sciences, Charotar University of Science and Technology, Anand.

5. Sharma, Anchal. **Mitigation of aggregation of serum albumin, lysozme and yD-Crystallin by nanoparticles and studies on protein-nanoparticles interactions at molecular level**. (Dr. Kalyan Sunder Ghosh), Department of Chemistry, National Institute of Technology, Hamirpur.

Physics

1. Amit Kumar. **Synthesis and electrical properties of A and B site substituted ABO_3 type lead-free ferroelectric ceramics**. (Dr. Vijay Kumar), Department of Physics, Kurukshetra University, Kurukshetra.

2. Lalrinkima. **Study of surface half-metallicity of full-heusler compounds using *Ab initio* approach**. (Dr. Lalthakimi Zadeng and Dr. Dibya Prakash Rai), Department of Physics, Mizoram University, Aizawl.

3. Ranjta, Lovely. **Studies on nanotubes embedded nanocomposite polymer electrolyte membrane for various device applications**. (Dr. Neelesh Rai), Department of Physics, AKS University, Satna.

4. Saluja, Manpreet Kaur. **Nonlinear intractions in diffusion induced quantum semiconductor plasmas**. (Dr. Nishchal Yadav), Department of Physics, Vikram University, Ujjain.

5. Soni, Urveshkumar Sunilkumar. **Magneto-optical characterizations of water-based magnetic fluids**. (Dr Rucha Desai), Faculty of Applied Sciences, Charotar University of Science and Technology, Anand.

❑

PAYYANUR COLLEGE PAYYANUR
Phone: 04985 202497, 0497 2805521
[Aided College Affiliated to Kannur University]
{Re-accredited by NAAC with "B+" Grade}

SITUATIONS VACANT

No. PCP/TS/2023   Dated, 12.06.2023

Applications are invited for the following posts in Payyanur College, Payyanur, against the existing permanent open merit vacancies approved by the Government of Kerala.

I. **ASSISTANT PROFESSOR:**
    A] ENGLISH –1
    B] PHYSICAL EDUCATION–1

Age and qualifications: As prescribed by the Government of Kerala and Kannur University, as per U.G.C. Regulations 2018.

Application form and other connected details are available on the website of the college **(www.payyanurcollege.ac.in).**

Last date: **Within one month** from the date of publication of this notification.

Sd/-
PRESIDENT

PAYYANUR EDUCATIONAL SOCIETY, (Reg.No.11/64)
PAYYANUR, KANNUR DISTRICT, KERALA 670 307

ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM, KOCHI-682011
website : www.teresas.ac.in
TEL: 0484-2351870, 2381312. Email : principal@teresas.ac.in

Re-Notification

STCAU/TS/267/2023   dt.14.06.2023

Applications are invited from eligible candidates to the post of **Assistant Professors** against the permanent vacancies in **Chemistry** (Persons with Disability-01 vacancy), **Mathematics** (Person with Disability-01 vacancy).

Scale of Pay, Qualification, Age etc will be as per the norms of UGC/University/Government of Kerala and as per the clause 34 of the Right of Person with Disability Act,2016 and G.O (MS) No.96/2021/Hr. Edn. dt. 15.02.2021.

Application forms can be can be downloaded from the college **website: (www.teresas.ac.in)** on an online payment of Rs.2000/-. Duly filled in applications, along with copies of all the required documents should reach the Principal **within 30 days** from the publication of this notification. Those who have already submitted their applications in response to our notification in December, 2022 and Corrigendum in March, 2023 need not apply again.

14.06.2023

Sd/-
Manager

SHIKSHAN PRASARAK MANDAL'S
KANKAVLI COLLEGE, KANKAVLI
At. Post – Kankavli, Vidyanagar, Kankavli, Dist. Sindhudurg - 416 602 (Maharashtra State)

APPLICATIONS ARE INVITED FOR THE POST OF
PRINCIPAL
FROM THE ACADEMIC YEAR 2022-23

AIDED

The advertisement is approved subject to the final decision in the Writ Petition No. 12051/2015.

The above post is open to all, however, candidates from any category can apply for the post.

Reservation for women will be as per **University Circular No.BCC/16/74/1998 dated 10th March, 1998. 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ICC/2019-20/05 dated 05th July, 2019.**

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18th July, 2018, Government of Maharashtra Resolution No.Misc-2018/C.R.56/18/UNI-1 dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241 dated 26th March, 2019 and revised from time to time".

The Government Resolution & Circular are available on the website: mu.ac.in.

Applicants who are already employed must send their application through proper channel.

Applicants are required to account for breaks, if any, in their academic career.

Application with full details should reach the **CHAIRMAN, Shikshan Prasarak Mandal's Kankavli College, Kankavli, Vidyanagar, Tal. Kankavli, Dist. Sindhudurg - 416 602 within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sou. Dr. R. S. Salunkhe	**Shri. V. J. Valanju**
Chairman	**Secretary**

Shikshan Prasarak Mandal, Kankavli, Dist. Sindhudurg

Margtamhane Education Society's
Dr. Tatyasaheb Natu College of Arts &
Senior College of Commerce, Margtamhane,
At/Post. Margtamhane, Tal. Chiplun, Dist. Ratnagiri, Pin-415702

APPLICATIONS ARE INVITED FOR THE FOLLOWING **CLOCK HOUR BASIS** POSTS
FOR THE ACADEMIC YEAR **2023-2024**

AIDED

Sr. No.	Cadre	Subject	Total No. of CHB Posts	Posts Reserved for
1.	**Assistant Professor**	Marathi	03	03- OPEN

The above posts are open to all, however, candidates from any category can apply for the post.

Reservation for women will be as per **University Circular No.BCC/16/74/1998 dated 10th March, 1998. 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ICC/2019-20/05 dated 05th July, 2019.**

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18th July,2018, Government of Maharashtra Resolution No. Misc-2018/C.R.56/18/UNI-1 dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241 dated 26th March, 2019 and revised from time to time". Remuneration of the above post will be as per University Circular No. TAAS(CT)/01/2019-2020 dated 02ndApril, 2019 & University Circular No. CTAU/23/2021-2022 dated 25th January, 2022.

The Government Resolution & Circular are available on the website : mu.ac.in.

Application with full details should reach the **CHAIRMAN, Margtamhane Education Society's Dr. Tatyasaheb Natu College of Arts and Senior College of Commerce, Margtamhane, At. Post. Margtamhane, Tal. Chiplun, Dist. Ratnagiri, Pin-415702 within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-
CHAIRMAN

Goa Vidyaprasarak Mandal's
DR. DADA VAIDYA COLLEGE OF EDUCATION
Shri Sitaram Kerkar Vidya Sankul
P.O. Box No. 139, Farmagudi, Ponda-Goa 403 401

Applications are invited with full Biodata from the Indian citizen for the following posts for B.Ed.

Sr. No.	Designation of the Post	No. of Posts	Nature	Category
1	Assistant Professor in Education (Methodology of Teaching Mathematics)	1	Regular	General
2	Assistant Professor in Education (Methodology of Teaching Science)	1	Lecture Basis	General
3	Assistant Professor in Performing Arts	1	Regular	O.B.C.

For further details regarding qualifications, requirement, kindly refer **website: www.gvmcollege.com** Knowledge of Konkani is essential and Marathi desirable.

Applications with photograph stating full Name, Address, Telephone/Mobile No., Email-ID, Age with Date of Birth, Teaching experience, Academic qualifications with percentage from S.S.C. and onwards along with copies of statement of marks of all public examinations, experience certificate and copy of the certificate for 15 years residence and OBC certificate from the competent authority should reach the undersigned **within 20 days** from the date of publication of this advertisement.

Date: 19-06-2023

Dr. Jojen Mathew

Place: Ponda, Goa

Offg. Principal

Mahatma Gandhi Mahavidyalaya, Ahmedpur, Dist. Latur

Wanted

Applications are invited from the eligible candidates for the following posts in **Mahatma Gandhi Mahavidyalaya, Ahmedpur, Dist. Latur (100% Granted)** run by **Vichar Vikas Mandal, Tq. Ahmedpur, Dist. Latur.** The Application duly completed with all respect's documents should reach on the following address **within Fifteen (15) days** of the publication of this advertisement. Candidates belonging to the categories other than open should also submit their one copy of application to **The Assistant Registrar, Special Cell, Swami Ramanand Teerth Marathwada University, Nanded.**

Sr. No.	Subject	Name of Post (Designation)	No. of Post	Reservation
1	Computer Science	Assistant Professor	02	OPEN - 03 ST – 01 NT-B- 01 NT-C- 01 OBC- 03 EWS - 01
2	Botany	Assistant Professor	01	
3	Zoology	Assistant Professor	01	
4	Geography	Assistant Professor	01	
5	History	Assistant Professor	01	
6	Commerce	Assistant Professor	01	
7	Sociology	Assistant Professor	01	
8	Mathematics	Assistant Professor	01	
9	Physics	Assistant Professor	01	

Permission as per NOC No. JDHE Nanded/NOC/2019/28 Dt. 29/05/2023.

Details of advertisement & Application format is available on www.srtmun.ac.in also on our college website: www. mgmahmedpur.org.

Note: The vacancies of Assistant Professor will be filled in subject to condition of the Decision in Writ Petition No. 12051/2015 pending in Hon'ble High Court of Judicature of Bombay, Bench at Aurangabad.

Correspondence Address: - Vichar Vikas Mandal's Mahatma Gandhi Mahavidyalaya, Ahmedpur, Dist. Latur- 413515 (Maharashtra).

Adv. P. D. Kadam	**Capt. Dr. Smt. A. M. Shinde**	**Adv. K.V. Bendkule**
Secretary,	**I/C Principal**	**President**
Vichar Vikas Mandal	**Mahatma Gandhi Mahavidyalaya,**	**Vichar Vikas Mandal**
Ahmedpur, Dist Latur	**Ahmedpur**	**Ahmedpur, Dist Latur.**

Nalanda Educational Foundation (Sanchalit)
Dr. Babasaheb Ambedkar College of Arts, Science and Commerce
Malekar Wadi, P.L. Lokhande Marg, Chembur Rly Station, Chembur (West), Mumbai – 400 089

(Permanently Unaided Degree College)
(Buddhist Minority)

APPLICATIONS ARE INVITED FOR THE POSTS
FROM THE ACADEMIC YEAR 2023- 2024 UNAIDED

Sr. No.	Cadre	Subject	Total No. of. Posts
1	**Principal**	---	01 F.T
2	Associate Professor	Business Management	02 F.T
3	Assistant Professor	Chemistry	04 F.T
4	Assistant Professor	Botany	02 F.T
5	Assistant Professor	Physics	02 F.T
6	Assistant Professor	Mathematics	02 F.T
7	Assistant Professor	Commerce	08 F.T
8	Assistant Professor	English/Business Communication	03 F.T
9	Assistant Professor	Business Law	03.F,T
10	Assistant Professor	Economics	04 F.T
11	Assistant Professor	History(History to Teach FC)	03 F.T
12	Assistant Professor	Accountancy	06 F.T
13	Assistant Professor	Psychology	01 F.T
14	Librarian	---	01 F.T
15	Assistant Professor	Information Technology	01 F.T
16	Assistant Professor	Computer Science	01 F.T
17	Assistant Professor	Food Production	01 F.T
18	Assistant Professor	Food & Beverage	01 F.T
19	Assistant Professor	Rooms Division Management	01 F.T
20	Assistant Professor	Management	01 F.T

The above post are open to all; however, candidates from any category can apply for the post. Reservation for women & disabled persons will be as per rule University Circular No. BCC/1647/1998 DATED 10th March, 1998 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ ICC/2019-20/05 dated 5th July,2019.

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18th July, 2018, Government of Maharashtra Resolution No. Misc-2018/C.R.56/18/UNI dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241 dated 26th March, 2019 and revised from time to time".

The Government Resolution & Circular are available on the **website: mu.ac.in.**

Applicants who are already, employed must send their application through proper channel . Applicants are required to account for breaks, if any, in their academic career.

Application with full details should reach **the Chairman / Secretary, Nalanda Educational Foundation (Sanchalit), Dr. Babasaheb Ambedkar College of Arts, Science & Commerce Malekar Wadi, P. L. Lokhande Marg, Near Chembur Rly Station, Chembur (West), Mumbai – 400 089 within 15 days from the date of publication of this advertisement. This is University approved advertisement.**

Sd/-
CHAIRMAN/SECRETARY

MAHATMA GANDHI MAHAVIDYALAYA
Ahmedpur, Dist. Latur

WANTED

Applications are invited for the post of Principal to be filled in Mahatma Gandhi Mahavidyalaya, Ahmedpur, Dist. Latur. (**Granted**) run by Vichar Vikas Mandal. Eligible candidates should submit their application along with all necessary documents **within Fifteen days** from the date of publication of the Advertisement by Registered post only.

Sr. No.	Post	No. Post	Full Time	Reservation
01	**PRINCIPAL**	One	Full Time	Unreserved

Permission as per NOC No. JDHE Nanded/NOC/2019/28 Dt. 29/05/2023.

a) **Educational Qualification:**

1) A Master's Degree with a least 55% marks (or an equivalent grade in a point scale whenever grading system is followed) by recognized university.

2) A Ph.D. Degree in concerned/ allied/ relevant discipline (s) in the institution concerned with evidence of published work and research guidance.

3) Professor/Associate Professor with a total experience of fifteen years of teaching/ research in Universities. College and other institutions of Higher Education.

4) A minimum of 10 research publication in peer reviewed or UGC listed Journals.

5) A minimum 110 research score as per Appendix II, Table 2 of UGC Regulations 2018.

6) Academic Eligibility and other Rules Regulations as per UGC Regulation 18 July, 2018 and Govt. Resolution No. Misc-2018/C.R.56/UNI-1 Date 08 March, 2019.

b) **Tenure :** A College Principal shall be appointed for the period of five years. Extendable for another term of five years on the basis of performance based assessment. A committee appointed by the University. Constituted as per rules of UGC and Govt. of Maharashtra.

Salary & Allowances:

Pay Scales shall be given as per the rules of UGC State Government & Swami Ramanand Teerth Marathwada University, Nanded.

Note:

1. Prescribed application form is available on the University **website (www.srtmun.ac.)**

2. No. T.A/D.A. Will be paid for attending the interview.

3. Eligible candidate should submit their application through the proper channel.

4. Attested Xerox copies of S.S.C. Certificates, Degree, Mark Sheets, etc. should be attached to be Application.

5. The original certificates must be provided at the time of interview.

6. The Vacant Posts are being filled under the decision of Hon. High Court, Aurangabad Bench, Petition No.12051/2015.

Correspondence Address: Vichar Vikas Mandal's Mahatma Gandhi Mahavidyalaya, Ahmedpur, Dist. Latur-413515 (Maharashtra).

Adv. P. D. Kadam **Secretary** **Vichar Vikas Mandal Ahmedpur,** **Dist Latur**	**Adv. K. V. Bendkule** **President** **Vichar Vikas Mandal Ahmedpur,** **Dist Latur**

AIU Notification for Inviting Proposal for AADC

The Association of Indian Universities, an apex-level representative body of universities and other higher education institutions in India invites proposals with an Expression of Interest (EoI) from the member universities for its newly introduced scheme i.e. Academic and Administrative Development Centres(AADC) to be established in select member universities.

AADC is a pioneering initiative of AIU which aims at organizing short-term training and capacity-building programmes for the faculty members and administrative functionaries of Indian Universities and other HEIs. Introduced in 2022, AADC is envisioned to function in a similar manner to the UGC Human Resource Development Centers operating in different universities. The focus of these centres is to provide training to faculty for online/blended mode of teaching-learning, developing e-content and using technology for continuous assessment and evaluation and research collaboration along with programmes on effective management using technology in governance and administration of universities.

Since its launching in last year, 09 Centres were approved by AIU which are functioning well and organizing the training programmes. As a policy, AIU has planned to add 10 centres each year to the list till the desired number of Centres is established. The general terms and conditions of establishing AADC are as follows:

- AADC is to be established under the banner of AIU and be named as **AIU-……. University, Academic and Administrative Development Centre**.

- AIU-AADC will offer short-term programmes of varying duration aimed at continuous capacity building of the key stakeholders through online and in-person modes.

- The Centres are to be allocated to 10 selected member universities of AIU based on their interest and required infrastructure.

- Initially, seed money of **Rs. 2.00 lakhs** will be provided by AIU as one-time financial support to each centre. Thereafter, the centers will be functioning in self-financing and self-sustaining mode

- **Rs. 1.00 Lakh** will be provided at the beginning of the first programme and the remaining One Lakh will be released after receiving the utilisation certificate from the University.

- Each Centre will organise 10 programmes in an Academic Calendar year.

- AIU will also provide academic support in identifying resource persons, planning and designing the academic aspects of the courses. The details of the programme structure, duration, selection of themes, preparation of training materials and modules, resource persons will be decided on mutual consultation and cooperation with the host/concerned university.

- A report after each programme may be submitted to AIU for documentation and publishing in University News, A Weekly Journal of Higher Education.

The proposal may be sent to **Dr Amarendra Pani, Joint Director & Head, Research Division** through email: ***researchaiu@gmail.com***. In case you need any further information, you may send your queries through the email ID mentioned.

Guidelines for Academic & Administrative Development Centres (AADC)

Introduction

As the third largest Higher Education (HE) system in the world, Indian HE not only caters to students in diverse locations across the sub-continent but also is in the process of achieving 50% GER by 2035. While this requires elaborate infrastructure in place and enabling policies of inclusiveness, there is a need to create pathways of continuous learning and updating of skills and new knowledge among faculty in order to make HE quality futuristic. The Human Resource Development Centres (HRDC) set up by the University Grants Commission and the AICTE Training and Learning (ATAL) Academy offer Faculty Development Programmes (FDPs) of varying durations for newly recruited as well as for mid-career professionals. In spite of these efforts, there is still a gap between the number of courses on offer and number of faculty to be trained. Further, there have been very few programmes for the upskilling of administrative staff in the HE system so as to prepare them for the changing e-governance requirements.

It is in this context that the Association of Indian Universities (AIU) proposes to set up Academic & Administrative Development Centres (AADC) in collaboration with universities across India. While the AIU will provide a seed money of Rupees Two Lakhs to set up the AADC, the programmes will be conducted on a self-sustainable basis.

Objectives of AADC

- Provide continuous knowledge and skill acquisition and enhancement for faculty in order to contribute effectively to the changing landscape of HE
- Train administrative staff in higher education institutions with appropriate skills to adapt to emerging information technologies
- Prepare library professionals and other technical staff in HEIs to contribute to knowledge cum learning and research resources as per the global demands and the local needs
- Introduce research scholars to the principles of academic integrity and professional ethics

Thrust Areas of AADC Programmes

The AIU-AADC will offer short term (one week) programmes aimed at continuous capacity building of the key stakeholders through online and in person modes. The thrust areas envisaged for the programmes include but are not limited to the following:

- Identifying the different components of online teaching and learning
- Designing e-content, open educational resources and adopting innovative in structural delivery models
- Mapping and matching pedagogies and technologies
- Exploring new knowledge domains
- Producing high quality and high impact research publications
- Identifying appropriate impact factor journals for submission of manuscripts forpublication
- Preparing winning project proposals
- Addressing local needs and realities through research in sync with Scientific SocialResponsibility (SSR)
- Integrating research and innovation in order to foster the entrepreneurial spirit among teachers and learners

- Reinforcing academic integrity and professional ethics
- Fore grounding innovation and start up ecosystem to train graduates to be job providers rather than job seekers
- Tapping CSR and philanthropy funding
- Adopting thrifty measures in resource mobilization and its optimal utilization
- Understanding and training of the e- governance models
- Using information and communication technologies (ICTs) in day-to-day administration
- Utilizing and enhancing teaching-learning resources with a view to make the library an information hub and knowledge house for the HEI
- Forging national and international research collaborations and industry linkages
- Fostering decentralization of administration with appropriate checks and balances
- Documenting best practices in teaching-learning, research and administration
- Creating quality benchmarks for the emergence of multiple levels of academic leadership
- Analysing ways of aligning institutional vision with local, regional, national and global needs in order to achieve the proposed goals of NEP 2020 as well as SDG goals.

Intended Participants

The participants of the AADC programmes include entry level, mid-career and senior Faculty, Research Scholars, Educational Administrators, Information Professionals, Technical Personnel and Academic Leaders. Programmes are to be designed as 'level-wise ladder type' schedules for the various cadres of faculty members and administrators with specially structured programmes for Research scholar's

Financial Model

The AIU will provide a seed grant of Rupees Two Lakhs to set up the AADC in selected institutions based on a competitive scrutiny of invited/ submitted proposals. The fee component presented by interested institutions should include the honorarium for resource persons, handouts and course material as well as the cost involved for providing boarding for the participants. The venue for hosting the training programmes as well as the subsidized accommodation provided to the participants has to be borne by the host university.

Operational Guidelines

Every university/ HEI that wants to start an AADC will enter into an agreement with the AIU.

Every AADC will have an Advisory Committee headed by the Vice Chancellor as the Convener and will include a nominee from AIU, two members of the IQAC, two senior academics and two senior administrators as well as two external experts as Members. The Coordinator of the Centre to be nominated by the Vice Chancellor, will be the Secretary of the Committee.

An Annual Calendar of Programmes will be created and circulated widely among the AIU members and displayed on the institutional website.

- Every AADC will nominate teaching, non-teaching and technical staff from among its human resources.
- The Coordinator of the AADC will be a faculty member at the level of Associate Professor and above. The coordinator will be paid a modest monthly honorarium.
- Every AADC will also have earmarked space and infrastructure within the HEI.
- Every AADC will prepare and disseminate the reports of programmes conducted in the dedicated link on the institutional website.

Association of Indian Universities

AIU Academic and Administrative Development Centres (AADC)

Structure for the Training Programs

1. **Proposed programs:**

   (Not exhaustive, the university may add more programs upon the requirement)

   (i) Use of technology in-

   a) Teaching learning/Pedagogy
   b) Research Collaboration
   c) Assessment & Evaluation
   d) University Governance & management

   (ii) Development of learning material and e-content

   (iii) Enhancing student engagement using technology

   (iv) Use of technology in-

   a) University Administration
   b) Examinations
   c) Finance

2. **Duration of the Programme-** 8-10 days

3. **Frequency of Programme-** 10 per annum

4. **Resource Persons (Details and Contact No.)-**Please engage the quality resource persons.In case the need is felt, AIU can suggest experts.

5. **Mode of delivery- (Any of the following)**

   a) Face to face
   b) Online
   c) Blended

6. **Target Audience (No.) –** Faculty/Administrators in university and colleges

7. **Group Size-** 25-30 approximately

8. **Branding/Promotion of Programs through following social media channels would be appreciated-**

   a) Twitter
   b) Instagram
   c) Linked In
   d) Facebook

9. **TA/DA-**To be borne by their respective Institute sending the trainees**.**

10. **Infrastructure Availability shall be ensured in terms of:**

    a) Classroom (Smart/Conventional)
    b) Teaching Learning aid & equipment

11. **Reasonable Course Fees may be levied**

12. **Possibility of non-commercial collaboration may be explored with Industry/ EdTech Companies.**

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