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National Education Policy-2020

The National Education Policy-2020 (NEP-2020), a flagship policy, was approved by the Union Cabinet of India on 29 July 2020, focuses on the futuristic vision and proposed changes to be brought in the new education system of India. It replaces the previous National Policy on Education, 1986. The principal aim of the policy is to build an education system rooted in Indian ethos that contributes directly to transforming India by providing high-quality education to all, thereby making India a global knowledge superpower.

NEP-2020 is indisputably a paradigm shift in Indian education system, keeping in view of its principal objective i.e. changing the very core of the education system in India. Further, NEP-2020 has a profound effect on every educational course in the country ranging from primary education to higher education and further research programmes. One of the major thrusts of the NEP was to put forward some momentous changes in higher education to promote higher engagement among students in higher education and equal opportunity for all students across India to receive a quality education. Engineering, being one of the most sought-after higher education streams in India and a promising source for better career opportunities, is pursued by millions of students every year.

Additionally, the All India Council for Technical Education (AICTE), a Statutory Body of the Government of India, embraced NEP-2020 in letter and spirit. AICTE carries out its mandate as a regulator and a genuine facilitator for its stakeholders. Further, AICTE has also synchronized and praised the move of NEP and in their Approval Process Handbook 2021-22 said that students are eligible for an undergraduate engineering programme by passing their Class XII board exam with any three subjects from Computer Science, Biotechnology, Agriculture, Engineering Graphics, Business Studies, Entrepreneurship, Physics, Chemistry, IT, Mathematics or Biology. (except subjects minimum % criteria is also there to be eligible for studying in Engineering)

The academic year 2019–2020, as well as the time since then, has seen significant changes in the educational landscape, including the opening up of institutions to become multidisciplinary, in line with the school education model of 5+3+3+4. There are NO compartments in the new system, 493which applies to the final four years of secondary education. In the new whole (in the last opening of subordinate instruction which is for FOUR age), skilled are NO compartments. Disciplinary Boundaries have happened distant/disappeared to advance overall growth of students indifferent punishments. Hard Boundaries (Physics, Chemistry, Mathematics) dictated for effort into ALL arms of architecture instruction (that are 367 in Diploma and 261 in Under Graduate) since very long time was moving approach to greater mechanics instruction for those the one had not taken these issues. In fact activities were suggesting bigger renovating of the effort requirements because undergraduates can take major challenges as per their inclinations.

The Positive Impact of NEP-2020 on Engineering Education in India is noteworthy because of its futuristic thinking and unparalleled vision. The policy focuses on Coding and gives top priority to introduce at schools. For instance, the NEP has suggested that beginning in class 6, coding be taught to all children in India. Students who will benefit from this change will have a better understanding of coding and a greater desire to study engineering in the future. By learning to code at an early age, they will also be able to instill the virtues of logical reasoning and fundamental intelligence. Therefore, the

introduction of coding beginning in class 6 will undoubtedly greatly boost the number of engineering aspirants in India.

Along with this, NEP provided the opportunity for Multiple Entry and Exit in their courses. Before settling on their career path, Indian students frequently attempt to become engineers. Due to the variety of entry and exit possibilities, students who are unsure about engineering or who wish to try their luck or abilities elsewhere can now do so. Students will benefit from being able to follow their passions before becoming engineers and turn those passions into successful careers. However, if they so choose, they can return and finish their education where they left off because their prior credits and marks will be kept in the academic credits bank, allowing them to resume their studies without the requirement for readmission.

Further, the policy has brought in many positive changes keeping its focal point on educational requirements. The Indian educational system put a lot of emphasis on theoretical and intellectual learning, which had little application in actual workplaces. The emphasis of education in India is shifting to a more practical-based approach that is anchored in its capacity to educate students' job-ready skills in an effort to address this issue at its source. It is anticipated that future engineerig students will graduate from college more prepared for the workforce because the curriculum is being altered from the ground up and a greater emphasis is being placed on internships and company visits.

Another praiseworthy effort of NEP policy is standardization of Fees & Marking Procedures. One of the best aspects of the NEP is the pledge to standardize the prices for government and private engineering schools and other colleges in order to guarantee equal access to education for all Indian students. Although the data is not yet available, it is anticipated that costs for engineering education will decrease over time as a result of government oversight of institute fees. As UGC and AICTE are to be combined into a single higher education board that regulates the standardisation of marking and fees of the higher education institute in India, similar prospects are planned for the marking schemes of all institutes, whether government and private.

How universities adopted NEP 2020

Keeping in view of the positive changes of the NEP 2020, JNTUK swiftly adopted the policy and initiated necessary revisions of syllabus in all subjects along with restructuring of courses to implement NEP 2020. In this connection, JNTUK informed the Senior Faculty of the concerned departments to send their suggestions through the college Principals/Directors on the syllabi of UG & PG programmes. In continuation of the changes, JNTUK introduced a new policy called breakstudy policy which is applauded by many corporate houses and student community. Further, City start-ups have lauded the JNTUK move to offer a one-year break to its students to pursue entrepreneurship.

By letting students choose whether they desire a one-year (certificate), two-year (diploma), threeyear (degree), or four-year (Hons) course as part of the four-year degree programme, the innovative approach makes the 4-year UG courses of the Bachelor's degree interdisciplinary. They will either receive a diploma or a degree, depending on how lengthy a course they take. Through this, JNTUK students will be able to take a break for around a year to focus on their research projects or internship projects. At the conclusion of the second and third years, students will have the option of taking a break to complete their internship. They can either pursue research and employment at a company, then return and finish the remaining semesters.

In addition to this, JNTUK followed NEP 2020 and brought in certain significant changes i.e. pattern of the examination marks has been changed. As earlier internal marks was 25 but now it will be 40, and external will be 60 as against 75 marks. For internal along with the two exams and other activities like online presentation, postal presentation, report writing and also what all assignments will be given by the concerned teachers would be included in the regards to the policy.

Along with this, the university has made significant changes to B.Tech. curriculum and introduced several key features to enhance the learning experience for students. One of it is extending flexibility in electives which empowers students with the freedom to choose from a wide range of free and departmental electives. Students are encouraged to undertake skill development courses and actively engage in community and service-oriented projects. Further, it opens opportunities for Industrial linkages, internships, incorporation of skill development, skill enhanced and MOOCs courses to enrich students academically.

Another prominent feature of MEP 2020 is encouraging (Atma Nirbhar Bharat) academic interaction/tie-up with Industry & Research Lab and the same is adopted by many universities and allow the students to earn credits from outside the institute. It offers B.Tech in Engineering Sciences, wherein a student can pick up any course of their choice in their 4 years. All the B.Tech students can opt for a Minor or Dual degree with a wide choice of specializations. The student can also get a Double Major by doing extra credits. Encouraging Cohesive Learning – Open-to-AllTeaching [OAT], real-time credited learning for remote learners.

Along with this, Digital Education and Life skills and overall development of the students are other features adopted by universities under the same policy. Thus, the National Education Policy 2020 emphasizes the need for vocational education to develop a skilled workforce.

How MICT adopted NEP 2020

MICT, being an autonomous institution, has adopted the similar guidelines implemented by its parent university JNTUK. The following are some of the broad guidelines adopted from JNTUK:

- Academic flexibility
- Break-study policy
- Choice of electives
- Change of pattern in marks and examinations
- Multi-disciplinary approach
- Encouragement for Innovative ideas
- Promoting Entrepreneurship
- standardization of Fees & Marking Procedures
- Multiple Entry and Exit system
- Focus on skilling programmes

By adopting NEP 2020, MICT has laid a special emphasis on the holistic development, skill enhancement, and industry-academia collaboration and thereby paved way for attaining success in academics and research. Further, to take stock of the NEP-2020, MICT conducted many workshops and

webinars on the implementation and essence of the new education policy to foster collaboration, share best practices, and discuss the way forward with students and staff.

Highlighting the importance of continuous learning, MICT collaborated with Virtusa, an industry partner and have jointly setup a Centre of Excellence (CoE). The following details about the collaboration:

1. Virtusa has agreed to partner with MICT, for the purpose of enriching practical skills and imparting industry relevant course curriculum to students of all engineering disciplines in the field of Information Technology.

2. Virtusa has agreed to provide with the material, software and access to the AIMS Library during the terms of this MoU.

3. Virtusa is going to offer Certification program to 2 to 3 nominated faculty members, after completion of the program the trained staff will be allowed to train certain number of students and these trained students shall be pre-selected by Virtusa.

4. In addition to this, Virtusa even proposed 2 courses; MICT is offering these programs as value added courses.

Further, MICT has active collaboration with Telangana Academy for Skill and Knowledge (TASK) and conducted many up-skilling workshops and training sessions for students besides providing inputs for unlearning as per the demands of the era. By organizing such skilling sessions, the institute is able to expand students' potential with new skills and uplift the competency and make them relevant for the industry they wish to thrive. Further, the college has been working relentlessly towards modifying the existing curriculum in Board of Studies (BoS) meetings to orient students and meet the industry demands.

In addition to this, MICT has adapted multiple entry-exit options, a multidisciplinary approach to provide a liberal education and offer credit choices to students that allow them to pursue a suitable career path. Furthermore, MICT is providing skill-based education, internship, and apprenticeship opportunities as well as industry mentors for students to be ready for Industry 4.0, as proposed in NEP 2020. In continuation to it, MICT is funding two best projects in each of the undergraduate and postgraduate courses by providing financial assistance to the tune of Rs 20,000/- per project.

The objective of the funding is to encourage innovation, critical thinking and novel ideas among students. Further, MICT is ready to provide additional funding if required for Hardware projects and the funding will be further increased keeping the future needs into consideration.

Taking cognizance of a students' overall development, MICT has adopted experiential learning methodology, interdisciplinary approach and embraced hands-on practices for our students through teaching and learning practices. Further, the institute emphasized on imbibing critical characteristics like knowledge-seeking, social skill, teamwork, communication by involving students in a variety of curricular, co-curricular and extra-curricular activities at the formative years of students' life.

Additionally, MICT is pleased to announce the signing of Memorandum of Understanding with the University of Texas at Dallas, Texas, USA, wherein the academic collaboration between both the institutions is a significant milestone in our continued commitment to providing our students with

exceptional learning opportunities. By collaborating with UT Dallas, a prestigious research university, we aim to offer our students endless possibilities for educational growth, paving the way for them to advance in their careers, with UT Dallas offering specialized certification courses in Cyber Security, Nano Science & Technology, and other emerging fields. Students from all engineering streams can expand their skill sets and enhance their career prospects. This collaboration will also facilitate institutional exchanges and joint research programs, enriching the academic environment for both institutions' benefitting faculty and students.

At MICT, students are given the flexibility of choosing various minors, majors and electives along with encouraging students to take up internships and collaborations with various firms and universities across India and beyond. The institution provides B.Tech Programme with Minor & Honors Degree. Further, students of V to VIII Semester admitted in MR-21 and MR-22 regulations can pursue B.Tech with Minor & Honors Degree Programme along with regular B.Tech Course as per the provision given by JNTUK for the affiliated colleges.

MICT adopted NPTEL/MOOCS Courses in place of Professional Electives in B.Tech V Semester to VIII Semester for the students admitted in MR-21 and MR-22 regulations as per the guidelines issued by JNTUK from time to time.

Cells such as Institutes Innovation Council (IIC) of MICT encourage and help staff and students to be creative and novel in their academics, research and consultancy work. Career Guidance Cell-MICT provides required guidance for students about scholarships in pursuing Masters' Program abroad after their B.Tech. Entrepreneurship Development Cell (EDC) conducts training and skilling progrmmes to foster techno-entrepreneurial ability and skills in young minds.

MICT is pleased to share that many faculty members of MICT have received funding from several government bodies and some projects were submitted. Of late, few faculty members submitted their research proposals for possible funding under the schemes of SERB, TARE and DST from AICTE, UGC and other sources.

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