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# Bapuji Educational Association<sup>®</sup> Bapuji Institute of Engineering and Technology

Post Box No.: 325, Davanagere – 577 004, Karnataka, India.

(Affiliated to Visvesvaraya Technological University and Approved by AICTE, New Delhi)

Accredited by NAAC with 'A' grade and NBA

Recognized by UGC, New Delhi under 2(f) and 12(B)

### **Institutional preparedness for NEP**

### 1. Multidisciplinary / interdisciplinary:

- a) Delineate the vision/plan of institution to transform itself into a holistic multidisciplinary institution.
- b) Delineate the Institutional approach towards the integration of humanities and science with STEM and provide the detail of programs with combinations.
- c) Does the institution offer flexible and innovative curricula that includes credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based towards the attainment of a holistic and multidisciplinary education. Explain
- d) What is the institutional plan for offering a multidisciplinary flexible curriculum that enables multiple entry and exits at the end of 1st, 2nd and 3rd years of undergraduate education while maintaining the rigor of learning? Explain with examples.
- e) What are the institutional plans to engage in more multidisciplinary research endeavours to find solutions to society's most pressing issues and challenges?
- f) Describe any good practice/s of the institution to promote Multidisciplinary / interdisciplinary approach in view of NEP 2020.

#### **Answer:**

Bapuji Institute of Engineering and Technology (BIET) is currently affiliated to Visvesvaraya Technological University (VTU). VTU in it's curriculum has implemented Choice Based Credit System (CBCS) for UG programs from the year 2015 and for PG programs from the year 2016. VTU curriculum (UG and/or PG) includes courses which integrate crosscutting issues relevant to Professional Ethics, Human Values, Environment and Sustainability. UG students in 3<sup>rd</sup> and 4<sup>th</sup> year study the courses other than their domain as "open elective courses" to gain knowledge on technologies/concepts of other domains. Through the student induction programme (SIP), technical talks on universal human values (UHV) and professional ethics are delivered by the experts so as to build the value education among the first year students. Institute has also formulated UHV cell involving faculties of all the domains who have undergone FDP on UHV offered by AICTE. Through AICTE Activity Points Programme,

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students have given knowledge to the nearby villagers on health, hygiene, digital literacy etc. Social Connect and Responsibility (21SCR36) course offered by VTU in third semester provides a formal platform for students to communicate and connect with their surroundings. NSS, NCC, YRCW wings of the Institute are actively engaged in imparting community and social service to the society thus improving the personality, team work and leadership skills of students. As per latest VTU regulations, students can acquire minor degree in AI & ML, Cyber Security, Data Science, IOT, Innovation and Entrepreneurship etc. by securing 18 credits. Also, latest regulations offer multiple entry and exit at the end of 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> years of undergraduate education. Institute is planning to get the autonomy status from VTU. With autonomy, flexible curriculum can be framed to suit the industry/societal requirements. With autonomy, Institute can also transform itself into a holistic multidisciplinary Institute by integrating humanities and science with STEM. Institute is also planning for infrastructure augmentation and faculty empowerment/up gradation to cope with NEP 2020 requirements.

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### 2. Academic bank of credits (ABC):

- a) Describe the initiatives taken by the institution to fulfil the requirement of Academic bank of credits as proposed in NEP 2020.
- b) Whether the institution has registered under the ABC to permit its learners to avail the benefit of multiple entries and exit during the chosen programme? Provide details.
- c) Describe the efforts of the institution for seamless collaboration, internationalization of education, joint degrees between Indian and foreign institutions, and to enable credit transfer.
- d) How faculties are encouraged to design their own curricular and pedagogical approaches within the approved framework, including textbook, reading material selections, assignments, and assessments etc.
- e) Describe any good practice/s of the institution pertaining to the implementation of Academic bank of credits (ABC) in the institution in view of NEP 2020.

#### Answer:

As BIET is affiliated to VTU, VTU in its regulations has implemented ABC policy for UG and PG students. As per the regulations, a student can be awarded with BE (Honors) degree if he/she is having minimum 8.5 CGPA up to 4<sup>th</sup> semester and before the completion of the program, acquires 18 credits through online courses offered by NPTEL, MOOCs platform – SWAYAM. As per new regulations, PG students (M Tech and MCA) have to study 2 NPTEL courses in first year to secure the mentioned credits. Students are also encouraged and motivated to take up NPTEL online courses to enhance their self-learning ability and gain knowledge on latest technological developments in their domains.

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#### 3. Skill development:

- a) Describe the efforts made by the institution to strengthen the vocational education and soft skills of students in alignment with National Skills Qualifications Framework
- b) Provide the details of the programmes offered to promote vocational education and its integration into mainstream education.
- c) How the institution is providing Value-based education to inculcate positivity amongst the learner that include the development of humanistic, ethical, Constitutional, and universal human values of truth (satya), righteous conduct (dharma), peace (shanti), love (prem), nonviolence (ahimsa), scientific temper, citizenship values, and also life-skills etc.
- d) Enlist the institution's efforts to:
  - i. Design a credit structure to ensure that all students take at least one vocational course before graduating.
  - ii. Engaging the services of Industry veterans and Master Crafts persons to provide vocational skills and overcome gaps vis-à-vis trained faculty provisions.
  - iii. To offer vocational education in ODL/blended/on-campus modular modes to Learners.
  - iv. NSDC association to facilitate all this by creating a unified platform to manage learner enrolment (students and workers), skill mapping, and certification.
  - v. Skilling courses are planned to be offered to students through online and/or distance mode.
- e) Describe any good practice/s of the institution pertaining to the Skill development in view of NEP 2020.

#### **Answer:**

VTU in it's curriculum has introduced UG and PG students to undergo internship for a period of 4/6/24 weeks in industry to enhance / upgrade their technical skills by knowing trending technologies in their domain area to cater to the socio-economic needs. VTU curriculum (UG and/or PG) includes courses which integrate crosscutting issues relevant to Professional Ethics, Human Values, Environment and Sustainability. Ability Enhancement Courses (AEC) offered by VTU for UG students are aimed at providing hands-on-training, competencies, value based skills, etc. Final year students are encouraged and motivated to take up project works related to societal problems and some students have also received funding from government agencies to execute the project work. Through the student induction programme (SIP), technical talks on universal human values (UHV) and professional ethics are delivered by the experts so as to

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build the value education among the first year students. Students of the Institute are motivated to participate in AICTE's Smart India Hackathon competition and also have prizes. Institute has made numerous MOUs with leading professional bodies / training centres / industries. Though these MOUs many activities such as industrial/site visits, technical talks, workshops, hands-on-training, internship are conducted to enhance skill level of students. Skill Development Centres / Labs are set up in every Department having latest equipment / software to enhance the skill level of students. MBA programme has established "Centre for Skill Development" in the year 2019. The centre helps the students to gain the required competencies and the confidence to face the real time situations in the corporate world. It also helps in bringing the cultural change in terms of professionalism in their approach and thinking. Institute is planning to offer Vocation degree courses as per AICTE guidelines in the upcoming years.

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# **4.** Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course)

- a) Delineate the strategy and details regarding the integration of the Indian Knowledge system (teaching in Indian Language, culture etc.) into the curriculum using both offline and online courses.
- b) What are the institutions plans to train its faculties to provide the classroom delivery in bilingual mode (English and vernacular)? Provide the details.
- c) Provide the details of the degree courses taught in Indian languages and bilingually in the institution.
- d) Describe the efforts of the institution to preserve and promote the following:
  - i. Indian languages (Sanskrit, Pali, Prakrit and classical, tribal and endangered etc.)
  - ii. Indian ancient traditional knowledge
  - iii. Indian Arts
  - iv. Indian Culture and traditions.
- e) Describe any good practice/s of the institution pertaining to the appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course) in view of NEP 2020.

#### **Answer:**

As the institute adheres to the framework of the VTU curriculum, the Indian knowledge system is integrated with the curriculum as UG students study Samskrutika Kannada / Balake Kannada in first year as mandatory credit courses. To identify the creative talents of students, Institute has set up student welfare council which conducts various cultural events viz. 'ethnic day', 'Davana' etc. every year. Various cultural events and competitions such as characters of Indian mythology, Indian carnival, classical music/songs, classical dance, rangoli, face painting, clay modelling etc. are conducted so that students can embrace the Indian culture and tradition. Institute also celebrates Kannada Rajyothsava every year on 1st of November to remember the formation of Karnataka state. For better understanding, in classroom teaching, faculties are also informed to explain the concepts in local language.

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### 5. Focus on Outcome based education (OBE):

- i. Describe the institutional initiatives to transform its curriculum towards Outcome based Education (OBE)?
- ii. Explain the efforts made by the institution to capture the Outcome based education in teaching and learning practices.
- iii. Describe any good practice/s of the institution pertaining to the Outcome based education (OBE) in view of NEP 2020.

#### **Answer:**

Institute has adopted OBE in teaching-learning process in it's teaching and learning process from 2018. Outcome Based Education (OBE) which is a student centric instruction with a clear statement on what Knowledge, skills and attitudes the Graduate Engineer will be able to demonstrate as having acquired on successful completion of a 4 year program of study. Vision and Mission of the Department are framed inline with the Institute's Vision and Mission. Program Educational Objectives (PEOs) and Program Specific Outcomes (PSOs) are also framed by every department to achieve it's vision and mission. Course Outcome (CO) statements are framed for every course and are mapped to 12 Program Outcomes (POs) given by NBA/Washington accord. Based on formative and summative assessments, the set target levels and set attainment levels for a program, attainment levels of POs and PSOs of all the courses of a program are computed. To bridge the curriculum gap and to address all the POs, site/industry visits, technical talks, seminars, workshops etc. are conducted by every Department. To check the effectiveness of teaching-learning process and to take necessary actions for further improvement, at the department level, Department Advisory Board, Program Assessment Committee and Department Quality Assurance Cell are constituted as per the guidelines given by Internal Quality Assurance Cell (IQAC) of the Institute. Institute was accredited by NAAC with 'A' grade in the year 2017. Various programs of the Institute were accredited by the National Board of Accreditation (NBA), New Delhi, during the years; 2000, 2004 and 2008. In the year 2021, 4 UG programs viz. Civil Engineering, Mechanical Engineering, Computer Science and Electronics & Communication are accredited by NBA for

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3 years and in the year 2022, the Electrical and Electronics Engineering UG Program is also accredited by NBA for 3 years. Also, 4 UG programs viz. Information Science and Engineering, Textile Technology, Biotechnology and Chemical Engineering have submitted Self-Assessment Report (SAR) to NBA.

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#### 6. Distance education/online education:

- a) Delineate the possibilities of offering vocational courses through ODL mode in the institution.
- b) Describe about the development and use of technological tools for teaching learning activities. Provide the details about the institutional efforts towards the blended learning.
- c) Describe any good practice/s of the institution pertaining to the Distance education/online education in view of NEP 2020.

#### Answer:

VTU has introduced e-Shikshana programme which is an advanced multi-modal, multiplatform, collaborative e-learning platform which allows course experts of VTU affiliated colleges to teach or interact with a large number of students across VTU affiliated colleges on a real-time basis through live audio video streaming and synchronized content sharing. Students of the Institute are informed to access the course contents (videos and notes) of VTU e-Shikshana programme. Under this scheme, Dr. K S Basavarajappa, Professor and Head of Mathematics Department of the Institute has delivered video lectures on Engineering Mathematics courses. As BIET is affiliated to VTU, VTU in its regulations has implemented ABC policy for UG and PG students. As per the regulations, a student can be awarded with BE (Honors) degree if he/she is having minimum 8.5 CGPA up to 4<sup>th</sup> semester and before the completion of the program, acquires 18 credits through online courses offered by NPTEL, MOOCs platform – SWAYAM. PG students are supposed to study 2 NPTEL courses in first year to acquire the mentioned credits. Students are also encouraged and motivated to take up NPTEL online courses to enhance their self-learning ability and gain knowledge on latest technological trends. Students are also motivated to watch SWAYAM PRABHA which is a group of DTH channels devoted to the telecasting of high-quality educational programmes across the length and breadth of the country on 24X7 basis. During pandemic, Institute has created various online platforms for smooth conduction of teaching and learning process. As IGNOU (Indira Gandhi National Open University) centre is set up in the Institute, students are informed to take up / register for the courses/programs as a part of distance and open education. Institute is planning to teach the courses in blended mode through LMS, to record the lecture

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videos and post these on Institute's website so that students can understand the concepts at their own pace.