



Deemed to be University under
Distinct Category

**National Institute of Technical Teachers'
Training and Research (NITTTR), Bhopal**
(Deemed to be University under Distinct Category)
Ministry of Education, Government of India

2025

Ordinance: Examination and Evaluation



- +91-755 2661600-602
- admission@nitttrbpl.ac.in
- www.nitttrbpl.ac.in
- /nitttrbpl
- /nitttrbhupalofficial
- /nitttrbhupal





NATIONAL INSTITUTE OF TECHNICAL TEACHERS' TRAINING & RESEARCH, BHOPAL

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Shanti Marg, Shamla Hills, Bhopal-462002, Madhya Pradesh

Ordinance: Examination and Evaluation- March 2025

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1. **Some Definitions:**

- 1.1.1. **"Academic Council"** is the body empowered to decide all academic matters in NITTTR Bhopal.
- 1.1.2. **"Academic Year"** consists of a duration of twelve months, beginning either in January to February **or** in the month of July to August, as the case may be, of every calendar year.
- 1.1.3. **"Award"** means qualifications such as certificate/diploma/degree awarded by NITTTR Bhopal when a learner has met the requirements of the qualification.
- 1.1.4. **"Biannual Admission"** means the process of admitting learners twice a year i.e. July/August and January/February.
- 1.1.5. **Course:** It means a subject comprising of 4-6 learning/course outcomes. This may spread across the semester.
- 1.1.6. **Credit:** One Credit is equivalent to 30 hours of learner's learning.
- 1.1.7. **Learning Hours:** For one year of education higher education and vocational education, training and skilling, 1200 hrs per year for the purpose of assignment of credits for which the learners shall be awarded 40 Credits, subject to assessment. Thus, one semester will have approximately 20 credits.
- 1.1.8. **Programme :** "Programme of study" means a higher education programme under study.
- 1.1.9. **Learning outcomes:** mean statements of what a learner knows, understands and is able to do on completion of a learning process.

2. **Flexibility Options:**

- 2.1. **Recognition of Prior Learning (RPL):** Recognition of Prior Learning means an assessment process designed to evaluate an individual's skills, knowledge, and experience acquired through formal, non-formal, or informal learning experiences.
- 2.2. **Academic Bank of Credits (ABC):** Academic Bank of Credits means an academic service mechanism as a digital, virtual or online entity established by the Commission with the approval of the Central Government to facilitate learners to become its academic account holders, thereby paving the way for seamless learner mobility between or within degree-granting Higher Educational Institutions through a formal system of credit recognition, credit accumulation, credit transfers and credit redemption to promote distributed and flexible teaching-learning.
- 2.3. **Credit Transfer:** Credit transfer means the mechanism by which the Higher Educational Institutions registered with the ABC are able to receive or provide prescribed credits to individual Academic Bank Accounts in adherence to the norms for the courses undergone/experiences gained by the learners through the offline/ online/ ODL/ Private/ RPL mode.



2.4. Facilitation for Transfer of Credits:

- The University shall facilitate the transfer of credits earned by its learners.
- A learner of the university seeking transfer of credit shall submit a written request, along with the fee as prescribed by the competent authority from time to time, to the controller of examination. Written requests will be entertained only if received from such candidates who have been duly selected for admission in a programme of study, as per the rules and regulations governing admission in the university.

- **Equivalence Committee:**

The controller of examination, upon receipt of such request, will send it to an equivalence committee constituted by the competent authority. The committee will verify the equivalence of the earned credit with the programme in which transfer of credit is requested. Based on the recommendation of the committee appropriate action may be taken.

2.5. **Multiple Exit:** It allows the learner to exit a programme at different stages and receive a corresponding certification and CGPA.

2.6. **Multiple Entry:** For programmes offering multiple entry options, the learner will be eligible to seek admission to the next level based on the recommendations of the equivalence committee.

2.7. **Programme Structure with Teaching-Learning and Assessment Scheme:** It is a comprehensive framework that outlines the total academic structure of the programme comprising of teaching-learning and assessment scheme, courses per semester with credits and marks requirements, Term work, and distribution of marks in formative and summative assessment. The percentage of formative and summative assessment in each course /programme may vary as per the requirement of the course/programme.

2.8. **Course and Examination Registration:** learners are required to register for examination from the courses in which he/she already registered at the beginning of the semester. Registration for each semester, except for the first semester, will occur during a designated week before the final exams of the preceding semester.

2.9. **Eligibility:** learners are eligible for enrolment only if:

- All outstanding fees owed to the university, up to the end of the previous semester are settled.
- They are not subject to any disciplinary action of the university that prohibits enrolment.



3. Assessment and Evaluation:

Constitution of Examination and Evaluation Committee: The Examination and Evaluation Committee (EEC) is a key body in a university responsible for ensuring the smooth conduct of examinations and maintaining the integrity of the evaluation process. The committee's mandate is to plan, organize, and oversee all matters related to the conduct of examinations, evaluation, and result declaration and award of degree. The committee will be constituted by the Director.

- a. The Committee shall consist of five members drawn from among the faculty and officers of the university. One member will be nominated as Chairman from amongst them by the Director.
- b. Three members present shall constitute the quorum.

3.1. Formative and Summative Assessment: Assessment in education is broadly categorized into Formative Assessment and Summative Assessment. Each serves a unique purpose in evaluating learner learning and development.

3.1.1. Formative Assessment: It is a continuous process that assesses the learner's performance throughout the semester. Different assessment tools and techniques, such as quizzes, assignments, portfolio-based assessments, seminars, projects, surveys, log books, questionnaires, rubrics, checklists, etc., are used appropriately. The aim is to monitor the learner's progress and provide feedback for improvement.

3.1.2. Summative Assessment: This is conducted at the end of a semester to evaluate the learner's overall learning and performance. It usually includes final exams, projects, or dissertations.

3.2. Process and Product Assessment: It is used for assessing learners' performance during and after learning events such as projects/laboratory/workshops/seminars, etc., through assessment tools such as rubrics/checklists etc.

3.3. Setting of Question Paper: The setting of question papers may be done by the internal faculty/ External experts. The pool of experts may be created by the head of the department and duly approved by the Director. An honorarium and travel allowances may be paid to experts as per the university norms from time to time.

3.4. Moderation of Question papers: The moderation of question papers is to be done by the nominated faculty. An honorarium and travel allowances may be paid to nominated experts/faculty as per the university norms from time to time.

3.4.1 Moderation of the question paper will be done to verify the question paper for some of the following points:

- a. Questions should not be Out of the Curriculum
- b. The question should cover the entire curriculum



- c. The questions should be aligned with the prescribed learning outcomes of the course.
 - d. Questions should be at the appropriate level of the taxonomy.
 - e. It should assess the various types of learners' performance.
 - f. Sufficient time should be given to the learner to solve the question paper within the prescribed time.
 - g. The question paper should have clear instructions for the learner.
- 3.5. **Conduct of Examination:** Formative assessment needs to be done as per the requirement of the course outcomes, and the marks may be communicated by the Head of the department formally to the controller of examination. The schedule of summative assessment for each semester will be as per the academic calendar.
- **Unfair Means:** The University may deal with cases of unfair means or indiscipline as mentioned below but not confined to.
 - a. Possession of incriminating material related / unrelated to the subject of the examination concerned.
 - b. Found copying either from the possessed material or from a neighbour.
 - c. Inter-changing of answer sheets.
 - d. Change of seat for copying.
 - e. Trying to help other candidates.
 - f. Found consulting neighbours.
 - g. Exchange of answer sheets or relevant materials.
 - h. Writing some other candidate's enrollment/roll number in the main answer paper.
 - i. Insertion of pre- written answer sheets (Main sheets or Additional Sheets)
 - j. Threatening the invigilator or insubordinate behaviour as reported by the invigilator/Controller of Examination.
 - k. Cases of impersonation.
 - l. Mass copying.
 - m. Using electronic devices for the purpose of malpractice.
 - n. The examination and evaluation committee may declare any other act of omission or commission to be unfair means in respect of any or all the examinations.
- If the Director is satisfied that there has been mass-scale copying or use of unfair means at a mass-scale particular hall/room, he may cancel the examination of all the candidates concerned and order re-examination.
 - a. A candidate shall not be forced to give a statement, but the fact of his /her having refused to make a statement shall be recorded by the exam superintendent and shall be attested



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by two other members of the supervisory staff on duty at the time of occurrence of the incident.

- b. A candidate detected or suspected of using unfair means in the examination may be permitted to answer the question paper but on a separate answer book. The answer book in which the use of unfair means is suspected shall be seized by the exam superintendent, who shall send both the answer books to the controller of examinations with his report. This will not affect the concerned candidate's appearance in the rest of the examinations.
- c. All cases of use of unfair means shall be reported immediately to the controller of examinations.
- d. All the cases of alleged use of unfair means shall be referred to the examination and evaluation committee.
- c. All decisions taken by the Examination and Evaluation Committee will be placed before the Director for approval.
- d. A candidate, within one month of the receipt of the decision of the University, may appeal to the Director in writing for a review of the case. If the Director is satisfied that the representation merits consideration, he/she may refer the case back to the Examination and Evaluation Committee for reconsideration.

3.6. **Valuation of Theory, /Practical, /Term Work including Project:**

Valuation of end-semester theory answer sheets may be coordinated by the controller of examinations on the specified date and time.

3.7. **Grading System (SGPA, CGPA) with profile reporting:**

After adding the components of the formative assessment marks to the summative assessment of the theory, practical, and term work in each semester, the marks secured by a learner shall be converted into a letter grade. The grade points are the numerical equivalent of letter grades assigned to a learner in the points scale as per the tables given below:

Table 1 Letter Grade and Grade Points for Courses (Except Ph D Course work)

| Percentile of Marks | Letter Grade | Grade Point | Academic performance |
|---------------------|--------------|-------------|----------------------|
| 91 and above | A++ | 10 | Outstanding |
| 81-90 | A+ | 9 | Excellent |
| 71-80 | A | 8 | Very Good |
| 61-70 | B+ | 7 | Good |
| 51-60 | B | 6 | Above Average |
| 46-50 | C | 5 | Average |
| 40-45 | P | 4 | Pass |



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| Percentile of Marks | Letter Grade | Grade Point | Academic performance |
|---------------------|--------------|-------------|----------------------|
| Less than 40 | F | 0 | Fail |
| - | Ab / Dt | 0 | Absent / Detained |
| - | I | 0 | Incomplete |
| - | W | 0 | Withdrawal |
| - | X | 0 | Continued Project |

Table 2: Letter Grade and Grade Points for Courses (For Ph D Course work)

| Percentage of Marks | Letter Grade | Grade Point | Academic performance |
|---------------------|--------------|-------------|----------------------|
| 95 and above | A++ | 10 | Outstanding |
| 85-95 | A+ | 9 | Excellent |
| 75-84 | A | 8 | Very Good |
| 65-74 | B+ | 7 | Good |
| 55-64 | B | 6 | Average |
| Less than 55 | F | 0 | Fail |
| - | Ab / Dt | 0 | Absent / Detained |
| - | I | 0 | Incomplete |
| - | W | 0 | Withdrawal |
| - | X | 0 | Continued Project |

Computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA)

- a. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e.

$$SGPA(S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where C_i is the number of credits of the i th course and G_i is the grade point scored by the student in the i th course.

- b. The CGPA is also calculated in the same manner taking into account all the course undergone by a student over all the semesters of a programme, i.e.

$$CGPA = \frac{\sum (C_i \times S_i)}{\sum C_i}$$

Where S_i is the SGPA of the i th semester and C_i is the total number of credits in that programme.



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- c. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the grade sheets and the transcripts. However, for the purpose of merit list and identifying the topper there will be no rounding off.

Table 3: Illustration of computation of SGPA

| Course | Credit | Grade Letter | Grade Point | Credit Point (Credit X Grade) |
|----------|--------|--------------|-------------|----------------------------------|
| Course 1 | 3 | A | 8 | 3 x 8 = 24 |
| Course 2 | 4 | B+ | 7 | 4 x 7 = 28 |
| Course 3 | 3 | B | 6 | 3 x 6 = 18 |
| Course 4 | 3 | O | 10 | 3 x 10 = 30 |
| Course 5 | 3 | C | 5 | 3 x 5 = 15 |
| Course 6 | 4 | B | 6 | 4 x 6 = 24 |
| | 20 | | | 139 |

Thus SGPA = $139/20 = 6.95$

Table 4: Illustration of computation of CGPA

| Semester 1 | Semester 2 | Semester 3 | Semester 4 | Semester 5 | Semester 6 |
|------------|------------|------------|------------|------------|------------|
| Credit:20 | Credit:22 | Credit:25 | Credit:26 | Credit:26 | Credit:25 |
| SGPA:6.95 | SGPA:7.8 | SGPA:5.6 | SGPA:6.0 | SGPA:6.3 | SGPA:8.0 |

Thus, CGPA = $(20 \times 6.95 + 22 \times 7.8 + 25 \times 5.6 + 26 \times 6.0 + 26 \times 6.3 + 25 \times 8.0) / 144 = 6.73$

- a. **Letter Grade:** It is an index of the performance of Learners in a course. Grades are denoted by letters A++, A+, A, B+, B, C, P, F, X, I, W, Ab/Dt etc.
- b. The essential outcomes/abilities attained by the learners may be mentioned overleaf to the grade sheet, of that semester.
- b. Outstanding performance shall be awarded if and only if every course of the programme offered to the learner is passed in the first chance of appearing in the paper that is offered to the learner. A learner with any semester break or 'I' grade shall not be awarded the Outstanding Performance.
- c. The CGPA multiplied by 10 shall be deemed equivalent to the percentage of marks obtained by the student for the purpose of equivalence to the percentage of marks.
- d. In case of any difficulty regarding the award of grades or working out SGPA or CGPA, the decision of the Director shall be final.



3.8. Progression and Promotion

- All learners admitted to an Odd Semester shall be eligible for promotion to the next Even Semester of the programme. To be eligible for promotion from an Even Semester to the next Odd Semester of the programme, a student shall be required to successfully complete at least 70% of the total credits allotted to all the courses registered by him/her so far, excluding the audit courses.
- Learners who are not promoted to the next semester of the programme may be allowed to register for backlog course(s) in the concerned semester during the next academic year. Such learners must apply for registration of course(s) before the commencement of classes during the concerned semester.

Example: If the candidate who has registered for 40 credits till the end of the even semester and has cleared courses equivalent to 28 credits may be promoted to the next semester of the programme. However, in case the percentage of registered credits is fractional, it shall be rounded off to the lower number. As an example, if the total credit registered till the fourth semester is 72, 70% of which is 50.9, that can be rounded off to 50. Therefore, a candidate clearing courses equivalent to 50 credits at the end of the even semester may be promoted to the next semester of the programme.

3.9. Grade Improvement:

- Learners securing a Letter Grade 'C' in other than Programmes and a Letter Grade "P" in Programmes in the theory course(s) of a semester may be allowed to improve their marks in such courses by repeating the end semester examination (ESE) subject to the restriction of a number of courses as specified in the later sub- clause. Opportunity to appear in the exam for grade improvement for a course will be allowed only once for a specific course. No further chance will be given under any circumstances.
- The facility for improvement shall be open to all those who want to improve their grade irrespective of the SGPA / CGPA obtained by them if/she has cleared all courses of a particular semester in which the student intends to take an improvement examination.
- The student shall make an application for an improvement examination to the concerned Head of the Department with a copy to the Dean of the School in the **prescribed form** along with the **prescribed examination fee** within seven working days of the commencement of the next semester.
- The improvement can be made only by appearing in the ESE and not the formative assessment. Appearance at an examination for improvement should take place immediately at the next opportunity available.



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- For determining the final CGPA / Division, the better of the two performances in the examinations will be taken into consideration.
- For the purpose of award of medals, prizes, and rank, etc., the grades obtained by a learner in the examination taken for improvement shall not be taken into account.
- The mark sheet of a student will indicate full information of the examinations taken by him/her. Both the Grades obtained in the 1st and 2nd attempts will be shown in the mark sheets.
- Learners can avail the facility of improvement examinations in two courses per semester.
- Grade Improvement is not permissible for dissertation/ laboratory/ project/ field/ internship courses etc.

3.10. **Declaration of Comprehensive Results (Marksheet):**

The grades/ marks of theory, practical and term work during formative and summative assessment for each course of each learner will be compiled by the Controller of Examination for declaration of SGPA/CGPA result .

3.11. **Award of Degree:**

An award of degree confirms that a learner has met all the requirements of a specific academic programme and is entitled to the corresponding academic title.

A learner shall be eligible for the award of the degree in the appropriate programme if the learner has:

- a. Undergone the prescribed programme of study by earning the minimum total number of credits specified in the programme within the maximum duration of N+N years. where N is the actual duration of the programme.
- b. No dues to the institution, Library, Hostels, etc.
- c. No disciplinary action pending against him/her.
- d. The learners have to complete the prescribed courses of study and satisfy other related norms.

3.12. **Revaluation and Re-totaling of Answer /Lab sheets:**

- The learners have the right to appeal for revaluation/re-totaling against any assessment/evaluation within seven working days of the declaration of respective semester results. Learners can avail of the facility of Revaluation/Re-totaling of answer sheets in maximum of two courses per semester.

3.13. **Duration of Programme and Semester:**

Every student who has admitted for a programme shall complete the full quota of the credits stipulated for the programme in not more than (N+N) years, where N is the actual duration of the programme.



- 3.14. **Examination Calendar and Schedule:** Examination Calendar indicating the tentative date of commencement of the University Examination (Semester/Annual) is prepared and be included as part of the academic calendar. Adequate arrangements shall be made for the conduct of all university examinations in accordance with the announced schedule. Where a particular examination is required to be re-scheduled due to unforeseen circumstances the COE shall make suitable announcements to all concerned regarding the alternative date(s) and alternative arrangements made by the University.
- 3.15. **On-Demand Examination:** University examinations can be scheduled On-Demand for the learners by the controller of Examination after approval of competent authority. The fees for the on-demand examination for the learners will be decided by the institute from time to time.
- 3.16. **Admit Card:**
- All learners who have registered for an end-semester examination and have fulfilled all the requirements stipulated in the academic regulations of the corresponding programme will be issued an admit card for the university examination.
 - The admit card will show the list of courses for which the student is eligible to appear in the examination.
 - The course(s) in which the student has not attained eligibility to write the examination will not appear on the admit card. The learner must produce the ID card and admit card at the examination room whenever demanded.



Annexure-I: Features of the Outcome-Based Curriculum:

About Outcome-Based Curriculum:

4. **Unique Features of the Curriculum Document:** NEP 2020 aligned Outcome-Based Curriculum Design and Development.
- 4.1. **Innovative Programme Structure (Teaching & Learning Scheme and Assessment Scheme):** An innovative programme structure with new concepts in the design of the teaching & learning scheme and assessment scheme has been developed. The features of formative assessment, term work and notional hours have been integrated into the teaching & learning scheme and assessment scheme as per NEP 2020 requirements. The different category/baskets of multi-disciplinary courses are integrated appropriately into the programmes structure for multi-disciplinary jobs.
- 4.2. **Multidisciplinary Approach:** NEP 2020 promotes a multidisciplinary approach to education. The outcome-based curriculum offers flexibility for Learners to opt for course(s) across the various programmes, thus encouraging them to choose their own path.
- 4.3. **Assessment:** Focus on Assessment for Learning, Assessment as Learning and Assessment before Learning rather than Assessment of Learning to ensure learning in each Learner. As envisaged in NEP 2020, formative assessment has been focused on curriculum rather than summative assessment. Class tests, midterm tests and quizzes using online/offline modes are proposed for formative assessment. There is a paradigm shift from high-stakes examination towards continuous and comprehensive assessment. Progressive Laboratory Assessment has been incorporated through process and product assessment using rating scales, rubrics, etc. This mechanism will monitor the Learner's progress and will ensure the achievement of learning outcomes at different levels.
- 4.4. **Criterion Reference Testing (CRT):** In an outcome-based curriculum, the focus is on Criterion Reference Testing (CRT). Hence, teachers need to identify different criteria for preparing rubrics of different Learner activities like seminars, lab experiments, project work, etc., for effective performance and assessment. The curriculum does not focus on Norms Reference Testing (NRT).
- 4.5. **Experiential Learning:** In line with NEP 2020, experiential learning is encouraged by integrating Learner's activities such as micro-projects, seminars, visits, surveys, etc. under the term work in each course. Minor & major projects, internships, industrial training and industry/field visits are appropriately integrated into the curriculum structure to expose the Learners to practical aspects and hands-on experiences.



- 4.6. **Flexibility:** Flexibility is introduced in the curriculum by introducing and providing a basket of open elective courses, programme-wise diversified courses and NEP-related interest/non-exam courses. The Learner can take up the course as per his / her requirement.
- 4.7. **NEP-Related Courses:** Many NEP-related courses have been integrated appropriately into the programme structure of different programmes.
- 4.8. **Learning to Learn:** For promoting self-learning, learning to learn and life-long learning skills in the Learners, MOOC, spoken tutorials, seminars, and online education resources are integrated appropriately into each course.
- 4.9. **Academic Bank of Credit (ABC):** The provision of Academic Bank of Credit (ABC) is there in the curriculum. It enables learners to pursue their academic interests and career aspirations by opting for different courses from other programmes. It also supports credit transfer. ABC enables the learner to drop out in any year and then exchange the credits earned so far with a 'certificate' if they are eligible. They can redeem the credits and rejoin the same or any other institute in the future and continue their education.
- 4.10. **Multipoint Entry & Exit:** Multipoint entry provisions may be operated based on the Recognition of Prior Learning (RPL). Credit may be awarded to the Learners after appropriate assessment. Similarly, Learner(s) may exit the programme at different points due to personal/professional reasons. After completion of tailor-made exit course(s) of total of 4 credits (skill-oriented) designed for different programmes at the institutional level and fulfilling other pre-requisite requirements, they may be awarded appropriate certification.
- 4.11. **Ethics & Values:** Ethical value-based education is emphasized and blended appropriately by explicitly including the course on 'Research and Publication Ethics and Professional Ethics in different programmes'.
- 4.12. **Indian Constitution:** For developing deep rootedness in the Indian culture and owning our country, the course on 'Indian Constitution' is integrated appropriately in the programme structure.
- 4.13. **Indian Knowledge System (IKS):** Integration of the Essence of the Indian Knowledge System (IKS) in the programme structure of all programmes as well as its integration with many course curriculums, has reflected the strong linkages with our traditional academic/professional practices.
- 4.14. **Entrepreneurship Development:** Entrepreneurship Development and Start-up' course for catalysing/promoting self-employment and start-up culture has been introduced as a common course in all programmes.



- 4.15. **Emerging Technologies:** The Learners will embrace emerging technologies by integrating cutting-edge courses/ emerging technology courses such as Cloud Computing, Big Data Tools, Smart Grid Systems, Hydro Power Systems, etc. The Learners have the provision of a Choice-Based Credit System (CBCS) to opt for any of the courses as per their requirements and interests.
- 4.16. **Green and Sustainable Environment:** A course on 'Environmental Education and Sustainable Development' has been introduced in the curriculums of all the programmes for addressing the concern for environmental protection. For developing awareness of renewable energy sources among Learners, courses on 'Sustainability and Renewable Energy Sources' are also offered in many programmes. Further, green and sustainable environment-related topics and subtopics are being identified in many courses to make Learners understand and imbibe these critical concepts in the design solutions provided by them.
- 4.17. **Holistic Development:** A common course on 'Sports, Yoga and Meditation', is included appropriately for holistic development and overall wellness of mind, body and spirit of the Learners.
- 4.18. **Information and Communication Technology (ICT):** To develop computer related skills, programming skills and promoting use of technology, several related courses on Next Generation Database, Information Retrieval Techniques Data Governance and Security in Big Data and etc. have been incorporated appropriately as per the requirements of different programmes.
- 4.19. **Online Educational Resources:** Several online educational resources for self-learning have been mentioned in each course curriculum document.
- 4.20. **Employability Skills:** Integration of concepts of holistic, continuous and comprehensive development of an individual along with honing/sharpening skills for employment have been focused by:
- Introducing a course on 'Employability Skills Development',
 - Integrating micro-projects, seminar topics, Learner activities at the course level and major projects at the programme level to promote experiential learning,
 - Integrating internships, field/industry visits and industrial training to make them understand the corporate ecosystem.
- 4.21. **Employment Potential:** Possible wage and self-employment avenues are mentioned separately for the awareness of primary stakeholders for each programme in the respective curriculum document.
- 4.22. **Project-Based Learning:** Project-based learning is emphasized to enable Learners to apply theoretical knowledge to real-world problems. Different categories of projects are



- included in the curriculum as micro, minor and major projects. A suggestive list of micro projects is included in each course, while minor & major projects are kept in different semesters. Through the project work, the Learners will be encouraged to think critically, develop an attitude of enquiry and inquisitiveness, promoting innovation, creativity, problem-solving skills, critical thinking, etc. In this way, the curriculum will inspire curiosity, nurturing a generation of lifelong learners leading to experiential learning.
- 4.23. **Specific Learning Outcomes:** Clear and measurable learning outcomes are mentioned at different levels such as Programme Outcomes (POs), Course Outcomes (COs) and Session Outcomes (SOs). For theory, the session outcomes are termed Theory Session Outcomes (TSOs) and for practical performance in the laboratory, the session outcomes are termed Lab Session Outcomes (LSOs).
- 4.24. **Soft Skills Development:** This curriculum does not focus on developing only course-specific technical knowledge but also on essential soft skills like communication, collaboration, teamwork, digital literacy, adaptability, ethics, positive attitude development, finance & managerial skills etc.
- 4.25. **Choice-Based Credit System (CBCS):** A flexible credit system in the present curriculum allows Learners to choose elective courses based on their interests and career aspirations, promoting personalized learning paths. Many courses are included in the curriculum to cater to the requirements of the personal development domain and overall personality development.
- 4.26. **Dynamic and Responsive Curriculum:** The innovative programme structure is so designed that as per the advancement in the respective programmes, programme-specific diversified courses and open electives can be updated from time to time.
- 4.27. **Research and Innovation:** The present curriculum fosters a culture of research, innovation and entrepreneurship, encouraging Learners to contribute to new knowledge & solutions. Learners are encouraged to develop creative and innovative abilities through project-based research work and suggested Learner activities.
- 4.28. **Advanced Pedagogical Methods:** Different advanced pedagogical methods such as improved lecture (L), tutorials (T), case method, demonstration, video demonstration, problem-based learning, etc. are emphasized to deliver the theoretical concepts and principles rather than only focusing on the 'lecture (L)' method. To ensure the Learner's learning, many such methods are clustered together to form the "Classroom Instruction (CI)" instead of the 'Lecture (L)' method. Similarly, for developing practical skills in the Learners, different methods are used in the laboratory/workshop/field; many such methods are clustered under the term "Laboratory Instructions (LI)" instead of only the 'Practical (P)' method.



- 4.29. **Notional Hours:** To acknowledge the time spent by Learners and teachers on academic discussions, assignments, self-learning, etc., the concept of notional hours has been integrated into the programme structure with the scheme of studies and a scheme of assessment.
- 4.30. **Use of Rubrics:** NEP 2020 emphasized the use of rubrics as assessment tools in different teacher-learning situations for valid and reliable assessment. The use of a “Rubric” has been propagated to assess the Learners in seminars, project work, assignments, laboratory experiments, industrial visits, internships, industrial training, etc., for quantitative and qualitative assessment of the Learner’s performance. Teachers need to prepare the rubrics for all these situations. It provides meticulous feedback for improvement in learning and, hence, achievement of learning outcomes.
- 4.31. **Industrial Training, Internship, Minor and Major Project:** To expose the Learners to the relevant practical skills and update them with relevant industrial requirements, internships, industrial training, minor projects and major projects are placed appropriately in the PS.
- 4.32. **Community and Society Development:** The Learners are promoted to take care of the society/community by inclusion of projects related to problems of ‘Community / Society’.
- 4.33. **Self-Assessment:** Self-assessment and portfolio-based assessment have been emphasized to a large extent by introducing the concept of rubrics and creating a bank of course-wise micro and programme-wise major projects.
- 4.34. **Communication Skills:** To cater to the requirement of development of soft skills/generic skills, the course on ‘Communication Skills’ is incorporated as the common course for many programmes.
- 4.35. **Course Articulation Matrix (CAM):** Course articulation matrix is provided in each and every course of UG/PG for CO-PO mapping as per NBA requirements.



राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण एवं
अनुसंधान संस्थान, भोपाल (म.प्र.)
**NATIONAL INSTITUTE OF TECHNICAL TEACHERS'
TRAINING AND RESEARCH, BHOPAL (M.P.)**
(A Deemed to be university under distinct category)

MINISTRY OF EDUCATION, GOVERNMENT OF INDIA

SHANTI MARG, SHAMLA HILLS

BHOPAL - 462002, MADHYA PRADESH - INDIA

Tel. : +91(755) 2661600 - 602, 607 - 608,

Email ID: director@nitttrbpl.ac.in

Follow us:  twitter.com/nitttrbpl  facebook.com/nitttrbhopalofficial  instagram.com/nitttrbhopal  www.nitttrbpl.ac.in

