



Digital Learning Policy (NPTEL and Digital Learning Resources)

1. Purpose

The purpose of this policy is to promote technology-enabled learning by integrating high-quality digital learning resources into the teaching-learning process, thereby enhancing academic excellence, employability, lifelong learning, and multidisciplinary education in alignment with the National Education Policy (NEP) 2020. The policy encourages the effective utilization of NPTEL, SWAYAM, Virtual Labs, National Digital Library, AICTE Learning Platforms, and other recognized digital resources.

2. Objectives

- Promote self-paced and lifelong learning.
- Improve students' conceptual understanding through blended learning.
- Enhance employability and industry readiness.
- Facilitate credit transfer through SWAYAM/NPTEL as per applicable regulations.
- Encourage faculty professional development through online certification.
- Increase the use of digital content in classroom teaching.
- Support multidisciplinary and flexible learning pathways envisioned under NEP 2020.

3. Digital Learning Platforms

The Institute recognizes the following platforms but not limited to

- NPTEL / SWAYAM
- National Digital Library of India (NDLI)
- Virtual Labs
- e-Yantra
- Coursera, edX, Microsoft Learn, Google Cloud Skills Boost, AWS Academy, Cisco Networking Academy etc.

4.1 Student Policy - NPTEL / SWAYAM

Every student shall mandatorily register for one NPTEL online certification course as the Open Elective in each designated semester, as prescribed in the curriculum. Successful completion of the course, including the proctored certification examination, shall be mandatory for earning the corresponding academic credits. Students enrolled in Honours and/or Minor programmes may complete the prescribed courses through NPTEL or other approved MOOC platforms. The credits earned shall be considered for the award of Honours/Minor, in accordance with the Institute's credit transfer procedure.



Guidelines Regarding Credit Transfer for NPTEL Online Courses

- **Learner Effort:**

- NPTEL Recommendation: **12-weeks NPTEL course:** 48 hours of learner effort (9 hours video + 3 hours assignments) = **3 Credits**.
- Obtaining the **Course Completion Certificate**.

- **NPTEL Credit Transfer Process**

- **Approval of NPTEL Courses :** The College Board of Studies (BoS) / Academic Council approved a list of eligible NPTEL courses that can be taken as Open Elective for credit transfer.
- **NPTEL Course Selection:** The student must enroll for the specific NPTEL course they are willing to take, where permitted by AICTE/UGC/University regulations, SWAYAM/NPTEL courses may be considered for credit transfer subject to Academic Council approval.
- **Enrollment on SWAYAM:** The student creates an account on the SWAYAM portal (swayam.gov.in) and enrolls in the selected NPTEL course. If already having an account they can simply do enroll the Course.
- **Enrollment Confirmation:** The student receives a confirmation email after successfully enrolling in the NPTEL course.
- **Email Enrollment Evidence:** The student emails a copy of their NPTEL course enrollment confirmation to the Department Coordinator as evidence.
- **Department Coordinator Review:** Department Coordinator should review and ensure the student has opted for an NPTEL Course that is part of the Institute approved list.
- **Department Approval:** Students must take prior approval of the Department through Coordinator, Class Teacher or HoD to register for the NPTEL course. They need to fill out an "**NPTEL Course Opt-in Form**" and attach an email copy of their enrollment as evidence.
- Based upon the "NPTEL Course Opt-in Form, Department shall submit the summary of the NPTEL Course opted by the Students to Office of Dean Academics.
- **Faculty Mentor Allocation:** A Department faculty mentor shall be allotted to each NPTEL course. The mentor shall monitor students' progress, ensure regular viewing of the video lectures and timely submission of assignments, present and reinforce the key concepts covered in the course, clarify students' doubts, and evaluate learning through periodic assessments and presentations.
- **Student Registration and Exam:** The student must register and appears for the proctored NPTEL course final exam. They should obtain the course completion certificate.
- After the completion of the course, the student shall be required to submit the photocopy of completion certificate showing marks obtained and the same should be verified by the Department. After due verification, the photocopy of completion certificate should be enclosed with NPTEL Course Opt-in Form for onward submission to Office of CoE through Dean Academics.



4.2 Faculty Policy - NPTEL / SWAYAM

- Faculty Members are hereby informed that it is mandatory to successfully complete at least One NPTEL course of minimum 8 weeks duration in each semester. The selected course must fall under emerging areas or be a specific-domain technical **course** relevant to your branch/discipline, if emerging area course is not available in the NPTEL list to ensure that it contributes meaningfully to your professional development and enhances subject expertise.
- NPTEL certifications are highly valued in the engineering profession as they promote knowledge upgradation, technical proficiency, and lifelong learning.
- Faculty members are informed to select the course that should be “**AICTE approved FDP Course**”. There is an MOU Signed between AICTE and NPTEL, whereby advanced NPTEL online certification courses are approved for Faculty Development Programme (FDP) by AICTE. Based on the number of weeks, the equivalence of the NPTEL Course with regular FDP will be assigned. To ensure that while enrolling in NPTEL courses, you choose your **Profession as FACULTY**
- Learners can obtain expertise in an area by completing a group of related courses. NPTEL is offering **DOMAIN CERTIFICATION** if a faculty member completes all CORE and the selected ELECTIVES in a domain within a period of 3 years. Hence, Interested Faculty Members are informed to finalize their Domain and in that, enroll in the Course(s). This may be considered under the Technical Course Category. For detailed information, **Refer: <https://nptel.ac.in/domains>**
- Faculty members can act as “**Mentor**” for a **maximum of 2 courses** with reasonable student count (**capped to 50-60**) under a course. It is mandatory that the mentor be enrolled in the course that he/she is mentoring. **Mentor will be recognized with certificates** and recognition on the portal depending on the performance of the students he/she mentored.
- **Course Integration:** Faculty shall integrate digital resources into regular teaching by assigning NPTEL videos, recommending digital readings, conducting flipped classrooms, using Virtual Labs, providing online assessments.
- **Mentoring:** Faculty shall mentor students enrolled in MOOCs, monitor weekly progress, motivate students for certification.
- **Course Mapping:** Faculty may map suitable NPTEL modules with the curriculum to enrich teaching.

4.3 Monitoring Mechanism

To ensure the effective implementation of digital learning initiatives and NPTEL/SWAYAM activities, the following monitoring mechanism shall be adopted:

NPTEL Local Chapter Coordinator (SPOC)

The NPTEL Local Chapter Coordinator shall coordinate the semester-wise registration process for NPTEL/SWAYAM courses and monitor student and faculty enrolment, course progress, examination registration, and certification statistics. The coordinator shall submit periodic progress reports to the IQAC and Academic Council, organize awareness programmes, orientation sessions, and promotional activities to encourage participation, and coordinate with academic departments to enhance enrolment, course completion, and certification performance.



Department NPTEL Coordinators

The Department NPTEL Coordinators shall encourage and monitor student and faculty participation in NPTEL/SWAYAM courses, guide learners in course selection, registration, and timely course completion, maintain departmental records of enrolment, course completion, and certifications, and periodically review participation and certification status.

5.1 Digital Learning in Teaching:

All faculty members shall adopt digital learning practices as an integral part of the teaching-learning process. Faculty shall ensure that:

- The Learning Management System (LMS) is regularly updated with course-related information, learning materials, assignments, quizzes, attendance, and assessments.
- Recorded lectures, digital learning resources, and supplementary study materials are made available to students through the LMS or other approved institutional platforms.
- Appropriate digital tools and technology-enabled teaching methodologies are integrated to enhance student learning and engagement.

5.2 Digital Learning Resources

- The Institute shall provide access to a comprehensive range of digital learning resources through the Central Library and other authorized platforms. These resources shall include, but are not limited to:
 - ✓ National Digital Library of India (NDLI)
 - ✓ IEEE Xplore Digital Library
 - ✓ ASME Digital Collection
 - ✓ ASCE Library
 - ✓ AIAA Digital Library
 - ✓ Springer e-Books
 - ✓ Elsevier e-Books
 - ✓ Shodhganga
 - ✓ DELNET
 - ✓ Institutional Digital Repository
 - ✓ Other digital databases and online learning resources subscribed to or approved by the Institute from time to time.

5.3 Responsibilities

- **Faculty Members:** Shall effectively utilize digital platforms for course delivery, regularly update LMS content, and encourage students to make effective use of digital learning resources.
- **Central Library:** Shall facilitate seamless access to subscribed digital resources, provide user support, and conduct awareness and orientation programmes to promote their effective utilization.
- **Students:** Shall actively access and utilize the digital learning resources provided by the Institute to support their academic and research activities.



6. Virtual Labs

The Institute shall promote the effective utilization of Virtual Labs to complement conventional laboratory education and provide students with flexible, technology-enabled practical learning experiences. Faculty members shall integrate Virtual Labs into relevant courses to facilitate experimentation, simulation, and concept visualization, particularly where physical laboratory access is limited or for pre-laboratory preparation. Departments shall encourage students to utilize Virtual Labs for self-learning, skill enhancement, and experiential learning in alignment with the curriculum and the objectives of NEP 2020 and AICTE initiatives.

7. Online Learning Platforms

The Institute shall promote the effective utilization of globally recognized online learning platforms, including Coursera, edX, Microsoft Learn, Google Cloud Skills Boost, AWS Academy, Cisco Networking Academy, and other approved platforms, to facilitate continuous learning, industry-relevant skill development, professional certifications, and lifelong learning. Faculty members and students shall be encouraged to participate in online courses, certification programmes, and hands-on learning activities offered through these platforms to enhance academic excellence, employability, and technological competency in alignment with the objectives of NEP 2020 and AICTE.

8. e-Yantra

The Institute shall promote the adoption and effective utilization of the e-Yantra programme to strengthen experiential learning, robotics, embedded systems, automation, innovation, and interdisciplinary project-based learning. Faculty members and students shall be encouraged to participate in e-Yantra training programmes, workshops, competitions, and collaborative projects to enhance technical competency, problem-solving skills, research aptitude, and industry readiness in alignment with the objectives of NEP 2020 and AICTE.

9. Review and Monitoring

The implementation and effectiveness of this policy shall be reviewed annually by the Academic Council based on key performance indicators, including enrolment, course completion, certification rates, utilization of digital learning resources, and other relevant performance metrics. Based on the review, the Academic Council may recommend appropriate measures for continuous improvement and effective implementation of digital learning initiatives.

10. Expected Outcomes

The implementation of this policy is expected to enhance the quality of teaching, learning, and academic engagement through the effective integration of digital technologies. It shall improve student employability and industry readiness by promoting continuous learning and skill development, strengthen faculty competency in emerging technologies and contemporary pedagogical practices, and improve academic performance through blended and technology-enabled learning. The policy shall also foster a robust digital learning ecosystem aligned with the objectives of the National Education Policy (NEP) 2020, AICTE guidelines, and other regulatory initiatives.




Director