INFORMATION BROCHURE – 2026

For admission to

POST GRADUATE DIPLOMA IN INTERNET OF THINGS (IoT)

(Industry Oriented and Practice Based)

Session 2026 – 2027

Last Date of Submitting e-Applications: 30th June, 2026

e-Application Link:

https://nitttrchdadm.samarth.edu.in/

Information Management & Emerging Engineering Department

National Institute of Technical Teachers Training and Research

(Deemed to be University Under Distinct Category)

Sector – 26, Chandigarh – 160 019

Phone: **0172-2759593; 0172-2759785**

Website: www.nitttrchd.ac.in

June 2026

PROGRAM AT A GLANCE

e-Application Link	**https://nitttrchdadm.samarth.edu.in/**
Name of the Programme	Post Graduate Diploma in Internet of Things (IoT)
Department	Information Management & Emerging Engineering
No. of seats	25
Target Audience	Industry Professionals / Technical Teachers / Scientists / Officials of Regulatory Bodies / Entrepreneurs / Engineering Graduates
Mode of Conduct	Hybrid
Practice-based	The program is Industry-oriented and practice based, with experts speakers from industry and industrial visits as integral part of the program
Flexibility	The program is offered with Multi-Entry, Multi-Exit option. If a learner exits after successfully earning the requisite credits of first semester, he/she will earn a *PG Certificate in Internet of Things (IoT)*. The learner may rejoin within a period of three years from the date of leaving the program to resume the learning journey.
Minimum Qualification for Admission	B.E/B.Tech in ECE,CSE, Electrical, Mechanical/MSc in Electronics/MSc in Computer Science/MCA (enrolled before 31-05-2013) *Subject to seat vacancy, candidates having B.E. / B.Tech. / AMIE (enrolled before 31-05-2013) in any engineering discipline / B.Sc. (Non – Medical) may enroll for PG Certificate in Internet of Things (IoT). Such candidates will be required to undergo a few self-paced online bridge courses as suggested by the department*
Programme Fee (in Rs.)	• **Application Fee : Rs. 500/- (Non-refundable and to be paid during Google Form Submission)** • Registration Fee (One Time) 2,000/- (Non Refundable) • Academic Fee 35,000/- per semester • Late Fee (within Two Weeks) * 1,000/- • Extension Fees 5,000/- per semester (after 2nd semester) • Security (Refundable)-One Time 7,000/- • Fees for other Facilities and Services 3,000/- per semester • Examination Fees 4,000/- per semester • Sports Fees 500/- per semester • Alumni Fees (One time) 500/- • Hostel accommodation expenses and Mess Expenses will be extra
Institute Virtual Tour	**https://youtu.be/Cg3KSNoTVE8**

National Institute of Technical Teachers Training and Research, Chandigarh

(Deemed to be University Under Distinct Category)

POST GRADUATE DIPLOMA IN INTERNET OF THINGS (IoT)

1. About the Institute

In realization of the need for training better quality technicians to meet the large-scale industrialization of the country, the Ministry of Education, Government of India, on the recommendations of All India Council for Technical Education (AICTE), established four Regional Technical Teachers' Training Institutes (now National Institute of Technical Teachers' Training & Research, (NITTTR) at Bhopal, Chandigarh, Chennai and Kolkata in 1967. The institute at Chandigarh, started in collaboration with Royal Netherlands Government (up-to 1974), was designed to meet the requirements of developing polytechnic education in the northern region covering the then states/UTs of Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh, Uttarakhand, Delhi and Chandigarh. The institute during this time acted as a resource system to technical education and provided guidance at national, state and institution levels in policy formulation, planning and management, quality controls etc. The institute is registered under the Societies Registration Act, 1860 and is managed by a Board of Governors.

To achieve its stated objectives, the institute undertakes the following spectrum of activities: Education and Training Programmes; Curriculum Development; Instructional Material Development; Research and Development; Extension Services; Consultancy in Technical Education and Technology areas. Keeping in tune with the various emerging needs of the country, the institute presently extends its services in the following areas as well: Media Development including information resources, their acquisition, storage and retrieval; Entrepreneurship Development; Industry Institute Interaction; Continuing Education for Working Engineers/Technicians; Rural Development; Transfer of Appropriate Technology to Rural Areas; Integrating Persons with Different Abilities with the Mainstream of Technical and Vocational Education.

Since 2003, engineering colleges in the northern region have been brought under the purview of this institute as per the directions of Ministry of Education (then the MHRD). Since then, this institute has been conducting many short-term courses in various subjects

for engineering college teachers, in addition to catering to their other needs. Further, the institute is also organizing induction training programmes and content based short term courses through ICT.

The status of the institute was elevated to a National Institute and renamed as National Institute of Technical Teachers Training and Research on 18 November, 2003with an objective to play a larger role for the improvement of Technical Education in the country. **Looking into the consistent performance and contribution in Technical Education System, the institute has now been granted the status of Deemed to be University under Distinct Category with effect from 22nd February 2024.**

Please take a virtual tour of the Institute at **https://youtu.be/Cg3KSNoTVE8** to have a glimpse of the wonderful facilities available in the institute.

2. Institute Vision, Mission and Quality Policy

Vision

a. To be a global centre of excellence for capacity building through transformative education, training and research.

Mission

b. Design and implement dynamic and flexible curricula to inculcate problem solving, design thinking, creativity, innovation and research through inter-disciplinary and multi-disciplinary programmes for inclusive and equitable education.
c. Develop professionals with ethics, social values and aptitude for lifelong learning.
d. Develop and implement innovative instructional and evaluation approaches for continuous quality improvement in higher education system.
e. Develop and provide repository of instructional resources for capacity building.
f. Collaborate with academia, research organizations, industry and other similar entities both at National and International level with sustainability perspective.

Quality Policy

NITTTR (Deemed to be University under Distinct Category) is committed to provide high quality and customized education, training, Research and Development (R&D) and extension services to technical and vocational education system, industry and community. The institute shall develop leadership in technical teacher training and provide educational products and services to enable the technical education system to achieve excellence internationally.

3. Objectives of Post Graduate (PG) Diploma Programmes

To keep pace with rapid advancement in technology, the country requires high quality manpower with technical and managerial capabilities in the 21st Century. There are primarily three distinct categories of technical manpower needed by the industry in the country i.e., engineers, technicians and skilled workers. Personnel of each of these categories play an equally important role in the day-to-day running as well as the development and growth of industry. The institutions which are producing technical manpower, therefore, need teachers who have the required knowledge and skills to train good technicians and engineers.

Thus, there is a great need to reorient and upgrade the knowledge and skills of existing teachers of technical institutions through Industry oriented and Practice based Programmes in Engineering and Technology. The PG Diploma program in Internet of Things (IoT) will help enhance the professional capabilities of industry professionals and of technical teachers for training technicians/engineers that would meet the changing requirements of industry.

4. About Information Management & Emerging Engineering Department

The objective of the Department of Information Management and Emerging Engineering is to conduct long term and short term programmes in the emerging areas of engineering like Internet of Things, Cyber Security, Data Analysis, Artificial Intelligence, Robotics, Intelligent Systems etc., which involve multidisciplinary approach. In addition, the Department also undertakes activities related to Instructional Material Development, R&D, Extension Services and Consultancy in these areas. The Department is equipped with Laboratories in the areas of Advanced Cyber Security, Artificial Intelligence and Internet of Things. The department also has the function of both External as well as Internal coordination activities. The external coordination includes liaisoning with the client system/stakeholders and internal coordination includes the academic coordination of the institute programmes and activities. The Department has established an IoT laboratory from AICTE, New Delhi which is equipped with variety of IoT sensors, microcontrollers, gateways and advanced IoT projects such as greenhouse monitoring system, healthcare monitoring system, smart home and many more. Furthermore, Department established Advanced Cyber Security Laboratory from Ministry of IT, New Delhi.

5. Special Features of PG Diploma Program

a. The program is offered with Multi-Entry, Multi-Exit option. If a learner exits after successfully earning the requisite credits of first semester, he/she will earn a *PG Certificate in Internet of Things (IoT)*. The learner may rejoin within a period of three years from the date of leaving the program to resume the learning journey.

b. The program is Industry-oriented and practice based, with experts speakers from industry and industrial visits as integral part of the program.

c. The nature of programmes offered are flexible, allowing self-pacing and taking up courses of study in a sequence and at the time convenient to the students within the maximum time frame as stipulated by the institute for the completion of the programme.

d. The curriculum contents of the programmes are aligned with the National Higher Education Qualification Framework and NEP-2020 guidelines.

e. Assessment of students' performance is based on both continuous evaluation and end-semester evaluation with the use of a variety of assessment techniques matching the learning objectives of different courses of study.

f. Almost all courses contain practical/laboratory tasks. These tasks form an essential component of the curriculum implementation.

6. Sanctioned Intake and Reservation

Sanctioned Intake:

Twenty Five (25) seats are available in Post Graduate Diploma in Internet of Things (IoT)

Reservation:

Reservation for SC, ST candidates, PWDs, OBC and EWS category is available as per instructions by Govt. of India applicable to all higher education Institutions.

Note:

The institute reserves the right of admission entirely and the decision of Institute authorities on admission will be final in all the cases.

7. Categories of Admissions

The preference for admission will be as per the following sequence of categories:

a) Sponsored Teachers/ Technical Staff of Technical Institutions/ Officials of State DTEs/ BTEs

b) Working professionals from Industry/ Other Organizations

c) Engineering Graduates aspiring to upgrade their knowledge and skill

8. Eligibility Criteria

- B.E/B.Tech in ECE, CSE, Electrical, Mechanical/MSc in Electronics/MSc in Computer Science/MCA from a recognized University or equivalent or AMIE** with at least 60% marks* in aggregate.
- Subject to seat vacancy, candidates having B.E. / B.Tech. / AMIE (enrolled before 31-05-2013) in any engineering discipline / B.Sc. (Non – Medical), with at least 60% marks* in aggregate, may enroll for PG Certificate in Internet of Things (IoT). Such candidates will be required to undergo a few self-paced online bridge courses as suggested by the department
- Working professionals must submit a No Objection Certificate from their employer.

.* relaxation in marks/grades as per GoI norms for reserved categories

** enrolled before 31-05-2013

Notes: 1. A certified copy of the conversion formula, in case of marks in grade points (i.e., CGPA to %), is essential.

2. Merit list will be prepared based on aggregate % of marks in B.E. or its equivalent X 0.4 (Multiplying Factor) plus one (01) score for each completed years of experience as on the last day of receiving application gained after obtaining minimum entry qualification and subject to a maximum of ten marks for experience.

9. Duration of the Programme

The normal duration of PG Diploma Programme is 1 academic year (2 semesters).

10. Programme Outcomes (POs)

After the completion of the course, the students will be able to

1. Design some IoT based prototypes
2. Know about different families and architectures of Internet of things and tools such as ARM Microcontrollers, Embedded operating systems, Wireless sensor networks, IoT architecture and protocols etc.
3. Design any IoT products (H/w or S/w or both) based on any of the above devices.

12. Programme Structure (Study and Evaluation Scheme):

ABBREVIATION

- PCC- Professional Core Courses
- PEC- Professional Elective Courses
- OEC- Open Elective Courses
- AUC- Audit Courses

Acceptance of RPL (Recognised Prior Learning)

- student can be given the credit for RPL after evaluation by a committee constituted by the institute authority

Acceptance of MOOC courses

a) MOOC courses taken for credit transfer must be approved and recommended by Head of the department.

b) MOOC course should be done from SWAYAM/NPTEL platform

c) To obtain the credit, the student needs to complete the assessment of the course and provide the certificate of the course issued by SWAYAM/NPTEL

d) The fees for the registration or assessment must be borne by the student only

e) The student can opt for a particular online MOOC course if and only if the credit of that course is equivalently mapped with the program structure.

11. Study and Evaluation Scheme in brief

Credit Distribution Structure for One Year Post Graduate Diploma in IoT (PGDIOT)

Semester I

Year	Level	COURSE CODE	COURSE NAME	Mode of Teaching	SCHEDULE FOR TEACHING			CREDITS	MARKS		
					L	P	T		Internal Assessment	University Examination	TOTAL
1	6	PGDIOT-PCC-01	Internet of Things: Design, concepts and Use cases (MOOC)	MOOC Course (Online)	2	-	-	2	50	50	100
		PGDIOT-PCC-02	Fundamentals of Arduino Programming	Contact Mode	2	6	-	4	50	50	100
		PGDIOT-PCC-03	Python Programming (Credit may be given for RPL)	Online	2	6	-	4	50	50	100
		PGDIOT-PEC-01	Elective I	Online	4	-	-	4	50	50	100
		PGDIOT-OEC-01	Elective II	MOOC Course (Online)	3	-	-	3	50	50	100
		Minor Project		Contact	-	14	-	5	100	100	100
		AUC	Audit I								
EXIT I: PG Certificate			**SEMESTER TOTAL:**		13	26		22	350	350	700

Semester II

Year	Level	COURSE CODE	COURSE NAME	Mode of Teaching	SCHEDULE FOR TEACHING			CREDITS	MARKS		
					L	P	T		Internal Assessment	University Examination	TOTAL
1	6.5	PGDIOT-PCC-04	Cloud Computing	Online	4	-	-	4	50	50	100
		PGDIOT-PCC-05	IOT Using Raspberry Pi	Contact	2	6	-	4	50	50	100
		PGDIOT-PCC-06	Data Analytics and IoT Use Cases	Online	2	6	-	4	50	50	100
		PGDIOT-PEC-02	Elective III	Online	4	-	-	4	50	50	100
		PGDIOT-OEC-02	Elective IV (Through MOOC)	MOOC Course (Online)	4	-	-	3	50	50	100
		Major Project on IOT Application Development		Contact		14		5	100	100	100
		AUC	Audit II								
EXIT II PG Diploma			**SEMESTER TOTAL**		16	26		24	350	350	700

Elective I

1. Sensors and Actuators
2. IOT Microcontroller Platform
3. Industrial IOT

Elective II

Open Electives through MOOCs from SWAYAM /NPTEL Portal

Elective III

1. Machine Learning using Field Sensor data
2. IOT Communication Protocol, Standards and Security
3. Big Data Analytics

Elective IV

Open Electives through MOOCs from SWAYAM /NPTEL Portal

Audit courses I and II

1. Value Education
2. Constitution of India
3. Pedagogy Studies

4. Stress Management by Yoga
5. Personality Development through Life Enlightenment Skills.

Criteria for Internal Assessment (Internal assessment components and % weightage to each component)

EVALUATION STRATEGY

Evaluation plays an important role in the teaching-learning process. The major objective of any teaching-learning endeavour is to ensure the quality of the product which can be accessed through learner's evaluation. The purpose of student evaluation is to determine the extent to which the general and the specific objectives of curriculum have been achieved. Student evaluation is also important from the point of view of ascertaining the quality of instructional processes and to get feedback for curriculum improvement. It helps the teachers in determining the level of appropriateness of teaching experiences provided to learners to meet their individual and professional needs. Evaluation also helps in diagnosing learning difficulties of the students.

Evaluation is of two types:

Formative and Summative (Internal and External Evaluation)

Formative Evaluation: It is an on-going evaluation process. Its purpose is to provide continuous and comprehensive feedback to students and teachers concerning teaching-learning process. It provides corrective steps to be taken to account for curricular as well as co-curricular aspects.

Summative Evaluation: It is carried out at the end of a unit of instruction like topic, subject, semester or year. The main purpose of summative evaluation is to measure achievement for assigning course grades, certification of students and ascertaining accountability of instructional process. The student evaluation has to be done in a comprehensive and systematic manner. In the present educational scenario in India, where summative evaluation plays an important role in educational process, there is a need to improve the standard of summative evaluation with a view to bring validity and reliability in the end-term examination system for achieving objectivity and efficiency in evaluation.

STUDENTS' EVALUATION AREAS The student evaluation is carried out for the following areas:

– Theory

– Practical Work (Laboratory, Workshop, Field Exercises)

– Project Work

Theory Evaluation: in theory aims at assessing students' understanding of concepts, principles and procedures related to a course/subject, and their ability to apply learnt principles and solve problems. The formative evaluation for theory subjects may be caused through sessional /class-tests, home-assignments, tutorial-work, seminars, and group discussions etc. For end-term evaluation of theory, the question paper may comprise of different sections.

Practical Work Evaluation : Evaluation of student's performance in practical work (Laboratory experiments, Workshop practical's/field exercises) aims at assessing students' ability to apply or practice learnt concepts, principles and procedures, manipulative skills, ability to observe and record, ability to interpret and draw conclusions and work-related attitudes. Formative and summative evaluation may comprise of weightages to performance on task, quality of product, general behaviour and it should be followed by viva-voce.

Project Evaluation: The purpose of evaluation of project work is to assess students' ability to apply, in an integrated manner, learnt knowledge and skills in solving real life problems, manipulative skills, ability to observe, record, creativity and communication skills. The formative

and summative evaluation may comprise of weightage to nature of project, quality of product, quality of report and quality of presentation followed by viva-voce.

12. Conditions for Appearing in End-Semester Examination

a) Attendance

A candidate shall be eligible to appear in the end-semester examination of a subject only if he/she has attended a minimum of 75% of classes in that subject. A deficiency up to 10% only may be condoned by the Director of the institute in special cases. A candidate who does not fulfill the attendance requirements in a subject will have to repeat the course of instruction in that subject.

b) Continuous Evaluation

Continuous evaluation comprises of two periodic tests (60% of total sessional marks) and assignments/class projects/presentations/group discussions (40% of total sessional marks) during a semester. No special test is permissible in continuous evaluation.

13. Evaluation Method

The grades, their respective description, the method for the Award of Grades, along with grade points are given below:

Marks	Grade	Grade Point	Description
≥ 90	A+	10	Outstanding
≥ 80 &< 90	A	9	Excellent
≥ 70 &< 80	B+	8	Very Good
≥ 60 &< 70	B	7	Good
≥ 50 &< 60	C+	6	Average
≥ 45 &< 50	C	5	Below average
≥ 40 &< 45	D	4	Marginal
< 40	F	0	Very Poor
-	R	0	Shortage of Attendance
-	I	0	Incomplete

- The Earned Credits (EC) are defined as the sum of credits for courses in which 'A+' to 'D' grade has been obtained.
- **Grade Points earned in a semester =**

  Σ (Course Credits X Grade Points) for courses in which 'A+' to 'D' grade has been obtained
- The Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are calculated as given below:

$$\text{SGPA} = \frac{\textit{Grade Points earned in a semestr}}{\textit{Credits registered in the semester}}$$

$$\text{CGPA} = \frac{\textit{Grade Points earned from first to current semester}}{\textit{Credits registered from first to current semester}}$$

- **Conversion formula from CGPA to Percentage = 10 x CGPA**

14. Fee, Funds and Expenses

Programme Fee

Head	Amount (in Rs)
Application Fees	Rs. 500/- (Non-refundable and to be paid during Google Form Submission)
Registration Fee (One Time)	2,000/- (Non Refundable)
Academic Fee	35,000/- per semester
Late Fee (within Two Weeks) *	1,000/-
Extension Fees	5,000/- per semester (after 2nd semester)
Security (Refundable)-One Time	7,000/-
Fees for other Facilities and Services	3,000/- per semester
Examination Fees	4,000/- per semester
Sports Fees	500/- per semester
Alumni Fees (One time)	500/-

* The student will not be allowed to attend classes after two weeks.

Total Fee to be paid at the time of admission: Rs. 58,500/-

Notes:

a. All institute fees, funds, expenses etc. whether recurring/ non- recurring are subject to revision by the institute from time to time.

b. Any student who fails to pay institute fees by the prescribed date may be fined, suspended or ultimately removed from the institute rolls. **The decision of the Director of the institute will be final in this regard.**

Hostels Charges (To be deposited at the time of allotment)

S. No.	Category	Charges in Rs.
1	For first year	12,500/- per semester
2	Beyond first year	5000/- per month (Maximum for period of one year) 500/- per day beyond above 1 year for a maximum period of 2 years

Notes:

1. Accommodation in Hostel will not be provided to the local students of Chandigarh, Panchkula, Mohali and nearby stations.
2. All students are required to conform to all Hostel/Mess Rules which may be enforced by the institute.
3. Hostel charges given above are subject to revision from time to time and students shall be required to deposit charges as applicable.

Mess/Canteen Charges

As per approved prevailing rates.

Refund Rules:

Except for the refundable deposit of Rs.7,000/-, no other amount will be refunded if a student leaves the institution after joining the programme. However, if a candidate does not join the institute or surrenders his/her seat without attending the classes within a week of start of the programme, the fee will be refunded as per UGC/AICTE guidelines.

15. Library

The Institute Library provides an extensive collection of information resources, services and facilities to our students and staff for their learning, research and personal development. Library system of the institute is more focused on creating and providing a comfortable and user-friendly environment that enables learning and advancement of knowledge, and also promotes discovery beyond classroom learning. The institute's state-of-the-art library boasts a collection of more than 50,000 books, 10,000 Indian standards, 575 e-books, 4000 bound journals, newspapers, CDs & DVDs, etc. The library collection consists of textbooks, reference books, technical journals, dissertations, e-Journals, encyclopedias and more. The library subscribes to 11 e-resources through the inflibnet's Shodh-Sindhu consortium namely ASCE, ASME, IEL, Springers journals, JSTOR, J-Gate etc. The library is fully computerized with Web-OPAC for instant online access to students and staff to use all types of information for their learning research and personal growth. The library occupies an area of 900 sq meters. 100 students can sit and study at a time comfortably in the reading halls of the library.

16. Medical Facilities

The institute has its own dispensary where the medical facilities exist for the students, staff and their families. A part-time doctor and an attendant have been engaged to look after the patients.

17. Hostel

The institute has three hostel blocks. In all, the institute has 108 single rooms in the Chandrashekhar Hall (girls), 80 rooms in Tagore Hall (boys) and 80 rooms in Amartya Hall (boys), accommodating nearly 350 students overall.

18. NITTTR (Deemed to be University), Chandigarh Alumni Association

It is mandatory for all students to become a member of NITTTR (Deemed to be University under Distinct Category), Chandigarh Alumni Association.

NOTE: 1. Academic Calendar will be uploaded on the Institute Website.

2. The institute reserves the right to make any amendment in the prospectus as and when deemed necessary.

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