TAMIL NADU SKILL DEVELOPMENT CORPORATION

INVITATION FOR EXPRESSION OF INTEREST

TO EMPANEL INDUSTRY PARTNERS TO PROVIDE SKILL TRAINING TO THE YOUTH OF TAMIL NADU IN ENGINEERING AND POLYTECHNIC COLLEGES UNDER THE NAAN MUDHALVAN UPSKILLING INITIATIVE
DATE OF ISSUE: 06.11.2024

TAMILNADU SKILL DEVELOPMENT CORPORATION, NAAN MUDHALVAN
SPECIAL PROGRAM IMPLEMENTATION DEPARTMENT
GOVERNMENT OF TAMILNADU
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| EMAIL: eoi@naanmudhalvan.in |
WEB: www,naanmudhalvan.tn.gov.in

Introduction

Tamil Nadu Skill Development Corporation (TNSDC) was established by the Government of Tamil Nadu in the year 2009 and registered under Section 8 of the Companies Act as a Non-Profit organization. TNSDC is working to meet the growing skill demands of the industry and aims to make Tamil Nadu the skill hub of the country. TNSDC has been designated as the Nodal Agency for Skill Development in the State

The Hon'ble Chief Minister's dream project **"Naan Mudhalvan"** was launched on the 1st of March 2022. The primary objective of the scheme is to enable more than 10 lakh students and youth across Tamil Nadu in industry-relevant skills. This empowers them with industry-relevant knowledge and skills enabling job readiness and in turn making Tamil Nadu, the skill capital of India. The "Naan Mudhalvan" program is a technology-driven platform that brings together diverse stakeholders; students, youth, colleges, internationally renowned academicians, professionals from the industry, mentors, subject matter experts, members from the community and administrators, all under one umbrella to better synergize and tap into the collective potential of the society to transform the skilling ecosystem of Tamil Nadu.

The "Naan Mudhalvan" platform enables the students and youth of Tamil Nadu to access and develop themselves on both their soft skills as well as industry-relevant core skills. On the soft skills side, students can upskill themselves through courses on personality development, entrepreneurship, personal finance and learning foreign languages. On the core skills side, students can access courses on industry-relevant skills provided free of cost on new and emerging technologies. Students can also access the psychometric tests available on the portal that enable both the students as well as the employers to assess the capabilities and natural strengths of the students to match their talent with relevant job opportunities in the industry.

The objective of this scheme is to identify potential skill imparters, to address skill gaps. Through this flagship program, the students will be able to industry-ready and would be in a position, to deliver work as soon as they graduate. The program also offers career and academic counselling to students in State educational institutions. Naan Mudhalvan holds 2000+ institutes as strong assets for creating 300+ career journeys.

Value Propositions Naan Mudhalvan provides free employment-linked skill development training to the Youth in the age group of 18-35 years across the state, fully funded by the Govt. of Tamil Nadu through TNSDC. These industry-relevant skill training are provided through empaneled global/national training partners across the state in different sectors like IT & ITeS, Healthcare, Media & Entertainment, Green jobs, Retail, Construction, Electronics and Hardware, BFSI, Logistics etc.

Scope of work: Naan Mudhalvan desires to engage industry and eminent training partners to deliver training for students pursuing Engineering, Arts & Science and Polytechnic in the state. The training partners to deliver training across the defined zone as offline in-person sessions as per the defined training Calendar. The training duration will be ranging between 45 to 60 hours spreading across a semester

MESSAGE FROM THE MANAGING DIRECTOR

Sub: Empanelment of industry partners to provide skill training to the students of Tamil Nadu in Engineering and Polytechnic Colleges under the Naan Mudhalvan Programme for the Academic year 2024-25.
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Expression of Interest is hereby invited from Firm / industry to act as an Industry Partner for training (TP) to provide skill training to the students of Engineering and Polytechnic Colleges under the Naan Mudhalvan Programme. The empanelment of TP may beconsidered for the current academic year or beyond subject to the necessity of the programme, satisfactory performance and mutual agreement. The signed application along with prescribed enclosures has to be uploaded to the online portal on the Naan Mudhalvan website (https://www.portal.naanmudhalvan.tn.gov.in/eoi/) Any queries regarding EOI shall bemailed to eoi@naanmudhalvan.in. TNSDC reserves the right to modify, amend or cancel theEOI without specifying any reason thereof.

Managing Director

ELIGIBILITY CRITERIA:

I Eligibility Criteria for Training Partners

Objective: Training Partners are responsible for providing both student training (in their respective colleges) and faculty training, along with industry certifications

1. **Company Existence:** Must be a company or firm registered in India with at least three years of operational education or skill training history.

2. **Financial Documentation:** Should provide audited balance sheets demonstrating financial stability for the last three financial years.

3. **Turnover Requirement:** Cumulative turnover must be at least ₹50 Lakhs (Rs.50,00,000) over the past three years to ensure sustainability.

4. **Training Experience:** Must have successfully trained at least 1000 candidates through structured skill training programs in offline modes over the last three years.

5. **Qualified Trainers:** Should employ qualified trainers for the courses, fluent in English and Tamil, and possess relevant industry experience.

6. **Infrastructure and Resources:** Must have the necessary infrastructure and resources to conduct training, including training materials and digital access like Learning Management Systems (LMS) where applicable.

7. **Placement Mechanism:** Required to demonstrate existing partnerships with at least ten companies for placement assistance, including success metrics for student placements.

8. **Curriculum Development:** Should have experience in developing industry-relevant curricula that align with evolving job market demands.

9. **Industry Connection for Certification:** Must establish connections with relevant Industry Partners that validate their training programs and certificates, ensuring that the qualifications awarded are recognized and aligned with industry standards.

II Eligibility Criteria for Industry Partners

Objective: Training Partners are responsible for providing both student training (in their respective colleges) and faculty training, along with industry certifications in addition to providing Training of Trainers (ToT) programs, ensuring continuous faculty development and assessment.

1. **Company Existence:** Must be a company or firm registered in India with a minimum of 5 years of operational history in the relevant industry sector.

2. **Financial Documentation**: Should provide audited balance sheets for the last three financial years showing robust financial health with an average annual turnover of ₹3 crore.

3. **Industry Expertise:** Must have recognized expertise and a proven track record in the relevant sector, demonstrated by existing products/services and market share.

4. **Training Personnel:** Should have a minimum of 10 industry personnel qualified to deliver training for each proposed course, possessing relevant industry certifications.

5. **Certification Authority:** Must be able to provide industry-recognized certificates upon

completion of training to validate quality and alignment with industry standards.

6. **Commitment to Training:** Required to have a dedicated team responsible for the Training of Trainers (ToT) programs, ensuring continuous faculty development and assessment.

7. **Partnership Network:** Should submit a comprehensive list of at least 15 companies for potential placements and demonstrate existing placement success metrics.

Contribution to Curriculum Development: Expected to collaborate with Training Partners in developing   curricula that reflect real-world industry needs, ensuring learners receive practical, applicable skills.

III Eligibility for Start-Ups

New investments or companies in sunrise sectors with a Memorandum of Understanding (MoU) with Guidance Tamil Nadu can apply for empanelment. Startups and sunrise sector companies recognized by or partnered with TIDCO, SIDCO, or registered with (DIPIIT) Department of Promotion of Industry & Internal Trade or any Tamil Nadu state/national government bodies or incubated in academic institutions are also eligible.

IV Industry Engagement through the Training of Trainers (ToT) Model

Training of Trainers (ToT) model, where industry partners must train college faculty members, conduct assessments, and provide certification in alignment with industry standards. Facilitate practical industry exposure for students through workshops, on-the-job training, and supervised projects.

Companies registered outside India can submit their EoI through the following email eoi@naanmudhalvan.in with relevant documents as mentioned in the guidelines.

STANDARD OPERATIONS PROCEDURE TO BE FOLLOWED

Schedule: TNSDC Naan Mudhalvan along with DCE shall publish the training calendar which has to be strictly followed by the Training Partner

Training Delivery: Deliver the course content effectively on the assigned date, using engaging teaching methodologies and providing real-life examples, industry use cases and practical exercises.

Coordination and Communication: Training Partner should have course coordinators who will be coordinating with the NM SPOC and college SPOCs to ensure smooth implementation at the college level. This includes resolving any technical issues or concerns/challenges faced by students during the course.

Participant Engagement and Support: Foster an inclusive and supportive learning environment, promoting active participation from students. Facilitate doubt-clearing sessions, address students query and provide additional support as needed.

Assessment and Evaluation: Design and conduct assessments, quizzes and assignments to evaluate student understanding and progress. Develop appropriate assessment rubrics and ensure timely submission of external marks.

Reporting and Documentation: Maintain records of student's attendance, assessment results, and other relevant data. Submit regular reports to NM team, providing updates on course progress, challenges and recommendation.

EXPRESSION OF INTEREST FOR EMPANELMENT OF SKILL TRAINING PARTNERS UNDER NAAN MUDHALVAN UPSKILLING INITIATIVES FOR THE ACADEMIC YEAR 2024-25 EVEN SEM

ABOUT THE APPLICANT	DETAILS
Organisation Name	
Organisation Registered Address	
Operational Address (if any)	
Year of establishment	
Registration No./License No:	
Organisation Average Annual Turnover	
Authorised Signatory (Name and Designation)	
Email Address	
Phone Number	
Nodal Person (Name and Designation)	
Email Address	
Phone Number	
Organisation Roles and Functions	
If CSR wing, please provide details of parent organisation	
GST NUMBER	
Annual Turn over 2021-22 2022-23 2023-24	

DETAILS OF PREVIOUS TRAINING EXPERIENCE (Not applicable for Industries)

Name of the Scheme and sponsored organisation	If training is under CSR, provide the organisation details	Sector	Course Name	No. of candidates trained	Mode of Training (Physical/Virtual/Hybrid)	Period of training (from - to)	No. of candidates placed	Remarks

DETAILS OF PROPOSED COURSES TO BE CONSIDERED UNDER NAAN MUDHALVAN PROGROGRAMME

Sl. No	Course Name	Sector*	Associated Job Role**	Duration (hrs)	LMS Availability (Yes/No)	LMS license validity for students – (duration)	Cost of the programme (Per student)		Cost per student (A+B)	No. of students proposed to be handled (cumulative and not per batch)	No. of trainers available
							Cost of trainer (A)	**Cost of infrastructure (if any) (B)**			

*Course Name and Sector   :   *Please refer to the details given in the Annexure*

**Associated Job Role   :   *Job role/designation that the students will pursue once they get trained in this skill course*

LMS   :   Learning Management System
Cost of the programme   :   Per student cost

General Guidelines:

A. All the skill courses under Naan Mudhalvan will be embedded in respective university curriculum as mandatory 2 credit programmes run during the college hours. Hence, the course duration for a semester program is normally 45 hours.

B. All the courses should be skill based with practical component covering the entire syllabus.

C. All the selected training partners should submit a video covering the specific course overview, skill components, job role, market demand, curriculum and certification.

D. All the selected training partners must conduct Faculty Development Programme along with master assessor training (FDP) i.e., training of the trainers at free of cost physically for a minimum of 6 days ensuring certification of faculty on the course offered (4 days of FDP & 2 Days for master assessor training)

E. All the selected training partners should submit course syllabus with learning outcomes, final test projects, Industry use cases, assessment plan and rubrics in a structured manner with guidelines of evaluation for faculties and students as per the format decided by Naan Mudhalvan authorities before the commencement of FDP.

F. All the assessments, test projects must be recorded.

G. Study material should be made available to all learners either as hard copy, PDFs or downloadable from link.

H. If the course has LMS component, the students access validity should be extended for additional period as recommended by the Naan Mudhalvan office. The LMS should be integrated with Naan Mudhalvan portal (API Integration) before commencement of training programme

I. All selected training partners should conduct weekly Ask-Me-Anything session (AMA Session) or Mentor Support with Doubt Clarification sessions until the course delivery and assessments are completed.

J. All training partner should have an official channel of communication with the learners with Naan Mudhalvan Point of Contact also as an admin (Eg: WhatsApp groups).

K. In addition to the final assessments and project submission, the training partners must conduct weekly quizzes and one mandatory hackathon for skill-based courses covering all the allocated learners /competition to enhance the learning objectives and should submit the plan accordingly.

L. Training Partners should submit the profiles of the master trainers, who will be conducting physical and virtual sessions, one week before the commencement of the programme. If the TP failed to submit the above list TNSDC has the right to cancel the work order. The TP should depute atleast one trainer for 50 students or below per batch.

M. Assessment training for selected faculty for joint final evaluation to be conducted by the training partner

N. Training Partner payment schedule

TERM	CONDITION	REPORTS REQUIRED
30% payment	Commencement of the training session with minimum 70% attendance in the first week	30% of the payment shall be released after completion of one week of the program on the **mandatory submission** of following reports by the Industry/Training Partner: • FDP Completion Report (which includes FDP Attendance, Assessment, Certification, Feedback & Geo-Tag photos) • Consolidated report of Student enrolment and attendance (as verified & attested by the concerned college Faculty/HOD and Principal / Dean) for first week of the training programme. • Structured course syllabus with learning outcomes, final test projects, Industry use cases, assessment plan and rubrics • Trainers Profile • API Integration of LMS Note 1: TP should ensure that all the students are enrolled and mapped for the course in the Naan Mudhalvan portal to release the payments
50% payment	Completion of the training	50% of the payment shall be released after completion of the program for the trained number of candidates on the mandatory submission of following report by the Training Partner: • Student attendance and final assessment reports which should be duly signed by the concerned faculty/ HOD and Principal/Dean of the concerned college in the format mandated by Naan Mudhalvan, TNSDC (or) as authenticated by Naan Mudhalvan Portal after college SPOC validation. Note 2 : TP should ensure that the attendance of the students are updated periodically in the Naan Mudhalvan portal to release the payment.

20% payment	Achievement of learning outcomes and placement agreement	Remaining 20% of the payment shall be released after successful completion of the program for the eligible number of candidates as per the assessment plan mentioned above. The following criteria are mandatory for the payment: - Students should have passed the final examination - Atleast one hackathon for each course is mandatory with a minimum participation of 70% of the mapped students. - Hackathon Report and the list of top 10% of best performing students should be submitted. Placement or physical internship is mandatory for this top 10% of the hackathon best performing students in the 6th semester. Virtual internship is allowed only for IT courses. - Internship (physical/virtual) for 4th semester can be optional. - Physical Internship is mandatory for 6th semester Engineering courses. Virtual internship is allowed only for IT computer courses. - Active participation in Naan Mudhalvan placement drives by bringing industries for job opportunities for the students.

NOTE: 100% payment will be given only for the students who have achieved the learning outcome and declared pass and subject to the above conditions. The advance payment of 80% will be deducted in case the student not achieving the learning outcome during the assessment.

DOCUMENTS TO BE SUBMITTED ALONG WITH THE EOI

1. Report document on your existing training infrastructure and resources with relevant annexures and copies of licenses, MoU – proof of projects, proof of placement
2. Income tax return filing for the last three financial years.
   FOR EACH OF THE PROPOSED COURSE
   a. Learning outcome (skill based), industry use cases, final test projects and Assessment rubrics should be attached for each proposed course.
   b. Relevant Software/LMS license details for the proposed courses
   c. List of devices/equipment/hardware required for each of the proposed courses
   d. Trainers profile for each of the proposed courses
   e. Components for the course summary in the below format

COURSE NAME	TRAINERS (Numbers)	SOFTWARELICENSE (Yes/No)If yes, Name	GLOBAL CERTIFICATION (Yes/No) if yes, Name	HARDWARE INCLUDED (Yes/No) if yes, Name	COMPANY CERTIFICATE

FOR PLACEMENT/INTERNSHIP ASSISTANCE
   a) Placement and internship plan for the proposed courses
   b) Problem Statements from Industries for Hackathon
   c) List of industries and organization associated for placements/internship Placement tie-up letters
   d) No. of projected vacancies available for each of the proposed job role in Tamil Nadu and India

Note:
Each of the proposed course duration should be normally 45hrs for 2 credits. Courses are open and we invite new age courses that would cater to the current industry requirements. New sectors with defined job roles and placement opportunities can be included by any applying training partner, provided there are placement tie ups supporting the same and to be produced along with this EoI

Covering Letter format with declaration

Format 1 - Applicant's Expression of Interest
To:
Managing Director,
Tamil Nadu Skill Development Corporation (TNSDC),
8th Floor, METROS,
No.327, Anna Salai, Nandanam, Chennai-600 035.

Sub: Response to the Expression of Interest for empanelment of industry partners to provide skill training to the youth of Tamil Nadu in Engineering and Polytechnic colleges under Naan Mudhalvan Upskilling Programme for the Academic year 2024-25-Reg.

Dear Sir / Madam,

In response to the Invitation for Expression of Interest (EOI) published on by TNSDC for empanelment of industry partners to provide skill training to the youth of Tamil Nadu in Arts & Science, engineering & polytechnic colleges under Naan Mudhalvan Upskilling Programme for the Academic year 2024-25, we would like to express interest to carry out the above proposed task. The details are attached herewith in the format given.

Declaration
I hereby declare that the information furnished is true and up to date and our Company is having unblemished record, is neither blacklisted or debarred by any regulatory body or Govt of India or any agencies for any reason whatsoever for indulging in corrupt and fraudulent practices or for indulging in unfair trade practices.

I understand that notwithstanding anything contained in this EoI, TNSDC reserves the right accept or reject any proposal and to annul the Empanelment Process and reject all Proposals at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons thereof.
In case it is found during the evaluation of proposals or at any time before signing of the Agreement or after its execution and during the period of subsistence thereof, that one or more of the pre-qualification conditions have not been met by the Partner or that the Partner has made material misrepresentation or has given any materially incorrect or false information, the Partner shall be disqualified forthwith and the Agreement, if signed, shall be liable to be terminated by a communication in writing by TNSDC to the Partner, without TNSDC being liable in any manner what so ever to the Partner

Yours Sincerely,
Signature of the applicant [Full name of applicant]
Stamp........................
Date:

Encl.: As above.
(Imp. Note: This is to be furnished on the letter head of the organization.

2024

NAAN MUDHALVAN ENGINEERING AND POLYTECHNIC

SECTORS - COURSES AND CAREER PATH

TNSDC CHENNAI – 05.11.2024

ENGINEERING COURSES:

Domain	Career Path	Course	Job Roles
Civil Engineering and Construction	Geotechnical and Infrastructure Engineering	Soil Mechanics using Software	Geotechnical Engineer, Infrastructure Designer, Civil Engineer
		Highway modelling, design and analysis	
		Site and Spatial Analysis	
	Hydraulics and Water Resource Management	Modelling of Hydraulics and Hydrology	Water Resource Engineer, Hydrologist, Urban Planner
		Water Distribution Network using EPANET	
	Structural and Construction Engineering	Structural Drawing and Detailing	Structural Engineer, Construction Manager, Civil Engineer
		Analysis of Reinforced Concrete and Steel Structures	
		Analysis and Design of Structural Systems	
		Building and Construction Drawing	
		Building Information Modelling	
	Surveying and Geospatial Analysis	3D modelling using Terrain LIDAR System	Surveyor, Geomatics Engineer, GIS Analyst
		UAV Mapping	
		.Net and Java for Geoportals	
		Google Earth Engine Programming	
		Blockchain for Land Records	
Robotics & Automation	CNC Programming and Automation	Essentials of Solid Modelling	CNC Programmer, Automation Technician, Industrial Automation Specialist
		Numerical Control Programming (Turning)	
		Numerical Control Programming (Milling)	
		Basics of PLC	
	Robotics and Industrial Design	3D Modeling	Robotics Engineer, Industrial Designer, Mechanical Designer
		Sheet Metal Modelling	
		Synchronous Modelling and Parametric Design	
		Industrial Robotics Level I	
	Advanced Robotics and Prototyping	Rapid Prototyping Technology	Advanced Robotics Engineer, Prototype Engineer, Automation Specialist
		Advanced Industrial Robotics	
Electronics and Instrumentation	Industrial Instrumentation and Control Systems	Sensors, Microcontrollers & Industrial Instrumentation	Instrumentation Engineer, Control Systems Technician, Industrial Systems Specialist
		Simulation of thermal systems	
		Battery Management System	
		HVAC Virtual Training	

Domain	Career Path	Course	Job Roles
	HVAC and Building Systems	HVAC systems for buildings - Design, Sizing & Selection	HVAC Engineer, Building Systems Engineer, Energy Systems Specialist
		Commercial Refrigeration	
		Energy Audit	
	E-Vehicle Systems and Thermal Engineering	E-Vehicle Fundamentals	E-Vehicle Systems Engineer, Thermal Systems Engineer, Energy Management Specialist
		E-Vehicle Powertrain architecture	
		Heat Exchanger Design	
Mechanical and Manufacturing Engineering	Advanced Manufacturing and Machining	Micromachining	Manufacturing Engineer, Machining Specialist, Sustainable Manufacturing Engineer
		Sustainable Machining	
		Tool Design	
		Forming Technologies	
		Non-Destructive Testing	
	Digital and Smart Manufacturing	Digital Manufacturing	Digital Manufacturing Specialist, Industry 5.0 Engineer, Process Optimization Analyst
		Industry 5.0	
		Rapid Prototyping through 3D Printing	
		Data Analytics for Mechanical Engineers	
		Artificial Intelligence & Machine Learning	
	Mechanical Systems and Simulation	Applied Computational Fluid Dynamics	Mechanical Systems Engineer, Simulation Specialist, Power Systems Engineer
		Piping Design	
		Simulation of Power Systems	
		PLC Programming	
	Network Analysis and Simulation	Convergence (Analysis Software)	Network Analyst, Network Simulation Engineer
	Industrial IoT and Automation	Industrial IoT	Industrial IoT Engineer, Automation Engineer, Data-driven Process Specialist
Computer Science and IT	Embedded Systems and Process Control	Motor Control Processors	Embedded Systems Engineer, Process Control Engineer, Instrumentation Specialist
		Sensor Interfacing Skills	
		Virtual Instrumentation	
		Embedded System Design for IoT Applications	
		Design and Analysis of Control Systems	
	Industrial IoT and Automation	IIoT for Process Industries	IIoT Engineer, Automation Specialist, SCADA Programmer
		HMI Programming using SCADA	

Domain	Career Path	Course	Job Roles
		Data Analytics in Process Industries	
	Cybersecurity and Risk Management	Cyber Security for Process Industries	Cybersecurity Specialist, Risk Analyst, Industrial Safety Engineer
		Hazard and Risk Analysis for Process Plants	
	Electronics and Hardware Design	Product Conceptualization and Prototyping	Electronics Design Engineer, PCB Designer, Prototyping Engineer
		PCB Design Using Cad Tools	
		RTL Design and Synthesis	
		Digital Signal Processors	
		x86 and ARM Processors	
Network and Communication	RF and Optical Communication	Transmission Lines & Waveguides	RF Engineer, Optical Network Engineer, Communication Systems Specialist
		RF System Design	
		Optic Fiber Network Infrastructure	
	Network Design and Infrastructure	WIFI Network Planning & Design	Network Engineer, LAN/WAN Specialist, Network Infrastructure Designer
		Computer Network through LAN / WAN	
		Firewall in Computer Network	
	Telecommunication and Device Assembly	Control Systems	Telecommunications Technician, Mobile Device Assembler, Electronics Assembly Specialist
		VLSI Design	
		Mobile Phone Assembly and Component Inspection	
Programming and Software Development	Software and Application Development	Java with Springboot	Software Developer, Application Developer, Backend Engineer
		Mernstack	
		Mobile Application Development	
	Data Science and Visualization	Scientific Computing Using Matlab	Data Scientist, Data Analyst, Business Intelligence Specialist
		Power BI	
		Data Visualization Techniques	
	Web and Interactive Design	Interactive Website Design	Web Developer, Frontend Developer, UI/UX Designer
		Web Programming Skills	
		Blender	
	Computer Vision and Natural Language Processing	Open CV	NLP Engineer, Computer Vision Specialist, AI Engineer
		Unity	
		Natural Language Processing Techniques	
		Speech Recognition Techniques	
Food and Polymer Industry	Product Design and Development	Sustainable Food Product Development	Food Product Developer, Product Designer,

Domain	Career Path	Course	Job Roles
		Food Plant Layout and Design	Sustainable Production Specialist
		Mind to Market Strategies	
		Good Manufacturing Process & Validation	
		Basics of PLC	
		Introduction to PLM	
	Polymer and Material Testing	Solid State Characterization	Polymer Scientist, Material Testing Engineer, Quality Control Specialist
		Ceramic Testing and Quality Control	
		Data Analytics for Polymer Industries	
		Low Voltage Switch gear	
	Additive Manufacturing and Simulation	Ceramic Additive Manufacturing	Additive Manufacturing Engineer, Simulation Specialist, CNC Operator
		CNC Turning - Operation and	
		Advanced Modelling & Kinematics	
		Mould Flow and Product Simulation	
		Plastic Injection Mold Simulation and Analysis	
		Advanced Simulation Process	
		Motion Simulation	
		Software for Robotics	
		Hands-on Training in CNC and Robotics	
	Data Science and Process Optimization	Data Science Fundamentals	Data Scientist, Process Optimization Specialist, Industrial Analyst
		Digital Twin	
		Data Visualization Techniques	
		Business Process Optimization	
		Machine Learning Algorithms	
		Solid Modelling	
Additive Manufacturing and Mechanical Design	3D Printing and Additive Manufacturing	3D Printing using NX	3D Printing Specialist, CAD Designer
		Additive Manufacturing	Additive Manufacturing Engineer, Process Engineer
	Design and Modeling	CATIA	CAD Designer, Mechanical Design Engineer
	Packaging and Simulation	Packaging Simulation	Packaging Engineer, Manufacturing Simulation Specialist
	Product and Manufacturing Design	Product Design and Manufacturing - 3D Surface Modelling	Product Designer, Manufacturing Process Engineer
		Foundation Skills in Integrated Product Development (Product Development)	Product Development Engineer, Manufacturing Process Engineer

Domain	Career Path	Course	Job Roles
	Simulation and Structural Analysis	ANSYS	Simulation Specialist, Mechanical Designer
		E TABS- Extended Three-dimensional Analysis of Building Systems	Structural Analyst, Building Simulation Engineer
		Hyper works	Structural Analyst, Mechanical Simulation Engineer
	Structural Design and Construction	Design and construction of Steel Buildings	Structural Designer, Steel Construction Engineer
Communication and Networking	Network Infrastructure	4G/5G Communication Networks	Network Infrastructure Engineer, Telecom Specialist
	Network Certification	CCNA - II	Network Administrator, Systems Engineer
		CCNA (Cisco Certified Network Associate)	Network Administrator, Network Support Specialist
	Network Fundamentals	Network Essentials	Network Technician, IT Support Specialist
Data Science and Analytics	Big Data and Data Engineering	Big Data	Data Engineer, Big Data Specialist
	Business Analytics	Business Analytics	Business Analyst, Data Analyst
	Data Visualization and Reporting	Data Visualization Techniques	Data Visualization Specialist, Reporting Analyst
	IoT and AI Integration	EBPL (IoT, Data Science, Data Analytics, Artificial Intelligence)	IoT Data Scientist, AI Integration Specialist
	Experiential Learning in AI and Analytics	Project Based Experiential Learning (AI/Data Analytics and Visualisation/Front End Development/ Software Testing)	Data Scientist, AI Developer, Software Testing Specialist
	Project Management in Analytics	Project Management using JIRA	Project Manager, Data Project Coordinator
Cloud Computing and Cybersecurity	Cloud Infrastructure and Management	Cloud Computing and Management	Cloud Administrator, Cloud Solutions Architect
	Cloud Fundamentals	Cloud Essentials	Cloud Support Specialist, Cloud Technician
	Cybersecurity and Forensics	Cyber Forensics	Cyber Forensics Analyst, Digital Forensics Investigator
	Ethical Hacking and Penetration Testing	Ethical Hacking	Ethical Hacker, Penetration Tester
	Advanced Computing and Quantum Technology	Quantum Computing with Black Opal	Quantum Computing Specialist, Research Scientist
	DevOps and Continuous Integration	DevOps	DevOps Engineer, Continuous Integration Specialist
	Containerization and Deployment	Docker	Docker Specialist, Containerization Engineer
Digital Skills and General Skills	Digital Literacy and IT Skills	Digital Skills	Digital Literacy Trainer, IT Support Specialist

Domain	Career Path	Course	Job Roles
	Communication and Language Skills	Communication English	Communication Trainer, Language Instructor
	Employability and Professional Skills	Employability Skill Course	Career Coach, Employability Skills Trainer
	Communication and Language Skills	English Language Skills for Employability	English Language Trainer, Soft Skills Instructor
	Professional and Soft Skills	Soft skills for 2nd year	Soft Skills Trainer, Career Development Specialist
	Operations Research	Operation research	Operations Research Analyst, Network Optimization Specialist
	UI/UX and Design Thinking	UI and UX Design	UI/UX Designer, User Experience Specialist
		Design Thinking	Design Thinking Facilitator, Product Designer
Embedded Systems and Electronics	Embedded Systems Design	Embedded System Design	Embedded Systems Engineer, Firmware Developer
	Chip Design and Verification	IC Chip Design and Verification	IC Design Engineer, Verification Engineer
	System on Chip (SoC) Architecture	Programmable System - on - chip Architecture for ARM Cortex- M0 devices	SoC Designer, Embedded Systems Architect
	Product Design and VLSI	EBPL (Software for Product, Design Thinking, Prompt Engineering, VLSI)	Product Designer, VLSI Engineer
	Embedded Programming	High Level C language application	Embedded Software Developer, C Programmer
Electrical and Electronic Vehicles	ADAS and Vehicle Simulation	ADAS ECU Simulation and Testing	ADAS Engineer, Vehicle Simulation Specialist
	Electric and Hybrid Vehicle Systems	Electric and Hybrid Vehicles	Electric Vehicle Engineer, Hybrid Systems Engineer
	Charging Infrastructure Design	Electric Vehicle Charging System Design	Charging Infrastructure Engineer, EV Charging Specialist
	Vehicle Technology and Manufacturing	Electric Vehicle Technology and Manufacturing	EV Manufacturing Engineer, Vehicle Systems Specialist
	Powertrain and Control Systems	EV Drive and Control	Powertrain Engineer, Vehicle Control Engineer
	Embedded Systems in Vehicles	EV Embedded System & ADAS	Embedded Systems Engineer, ADAS Integration Engineer
	Powertrain and Integration	EV Powertrain & Integration	Powertrain Integration Engineer, EV Systems Specialist
	Electrical Load Analysis	FLA- Full Load Amperes	Electrical Load Analyst, EV Electrical Systems Engineer
Enterprise Solutions and Business Management	CRM and Enterprise Software	Sales Force Developer	CRM Developer, Salesforce Consultant
	ERP and Business Solutions	SAP Tools	ERP Specialist, SAP Consultant

Domain	Career Path	Course	Job Roles
	IT Service Management	Serve pack	IT Service Manager, Service Support Specialist
	Entrepreneurship and Business Strategy	Entrepreneurship	Entrepreneur, Business Strategist
	Quality Management	Six sigma	Quality Control Specialist, Process Improvement Analyst
	Data-Driven Business Analytics	Business Analytics	Business Analyst, Data Analyst
	Supply Chain and Logistics	Logistics	Logistics Coordinator, Supply Chain Manager
Software Development and Programming	Full Stack Development	Full Stack Development-Mongo DB	Full Stack Developer, Database Specialist
		Full Stack Development with JAVA	Java Developer, Full Stack Developer
		Full Stack with Python Programming	Python Developer, Full Stack Developer
	AI-Powered Full Stack Development	Full Stack AI Tools	AI Developer, Full Stack Engineer
	Web Development Frameworks	Django Framework	Web Developer, Backend Developer
	Database Management and Application Development	Oracle Apex	Database Application Developer, Oracle Developer
	Generative AI and NLP	Prompt Engineering	NLP Engineer, AI Prompt Engineer
Image and Graphic Design	Graphic Design	Photoshop	Graphic Designer, Visual Artist
	Branding and Logo Design	Logo Design	Brand Designer, Logo Specialist
	Media and Cinematography	Cinematography courses	Cinematographer, Media Production Specialist
Robotics and Industrial Automation	Robotic Process Automation	Robotic Process Automation & Development (RPAD)	RPA Developer, Automation Engineer
	Industrial Automation	Industrial Automation	Industrial Automation Engineer, Control Systems Specialist
	Mobile Robotics Development	Mobile Robots Development	Robotics Engineer, Autonomous Vehicle Developer
	Simulation and Modeling	MATLab	Simulation Specialist, Robotics Engineer
	Image Processing for Robotics	Image Processing	Machine Vision Engineer, Robotics Vision Specialist
Building and Geographic Information Systems (GIS)	GIS and Geographic Analysis	AVN- GIS Software	GIS Specialist, Geographic Analyst
	GIS and Geographic Analysis	GIS	GIS Technician, Spatial Data Analyst
	Sustainable Building Design	Energy Efficient Buildings (Green Cement, Sustainability)	Sustainability Engineer, Green Building Designer

Domain	Career Path	Course	Job Roles
	Architectural Design Software	Revit	Architectural Designer, BIM Specialist
	Biomedical Device Regulations	Regulations and standards of biomedical devices	Regulatory Compliance Specialist, Biomedical Standards Officer
Physics and Simulations	Thermal Simulation and Analysis	Thermal related skill based course	Thermal Analyst, Simulation Engineer
	High-Performance Computing	High Performance Computing technology	HPC Specialist, Computational Scientist

LIST OF COURSES SECTORWISE

Civil Engineering and Construction:

Soil Mechanics using Software

Highway modelling, design and analysis

Site and Spatial Analysis

Modelling of Hydraulics and Hydrology

Water Distribution Network using EPANET

Structural Drawing and Detailing

Analysis of Reinforced Concrete and Steel Structures

Analysis and Design of Structural Systems

3D modelling using Terrain LIDAR System

UAV Mapping

.Net and Java for Geoportals

Google Earth Engine Programming

Blockchain for Land Records

Building and Construction Drawing

Robotics & Automation:

Essentials of Solid Modelling

Numerical Control Programming (Turning)

Numerical Control Programming (Milling)

Basics of PLC

3D Modeling

Sheet Metal Modelling

Synchronous Modelling and Parametric Design

Industrial Robotics Level I

Rapid Prototyping Technology

Advanced Industrial Robotics

Electronics and Instrumentation:

Sensors, Microcontrollers & Industrial Instrumentation

Simulation of thermal systems

Battery Management System

HVAC Virtual Training

HVAC systems for buildings - Design, Sizing & Selection

Commercial Refrigeration

Building Information Modeling

Energy Audit

E-Vehicle Fundamentals

E-Vehicle Powertrain architecture

Heat Exchanger Design

Mechanical and Manufacturing Engineering:

Micromachining

Sustainable Machining

Tool Design

Forming Technologies

Non-Destructive Testing

Digital Manufacturing

Industry 5.0

Rapid Prototyping through 3D Printing

Data Analytics for Mechanical Engineers

Artificial Intelligence & Machine Learning

Applied Computational Fluid Dynamics

Piping Design

Simulation of Power Systems

PLC Programming

Industrial IoT

Computer Science and IT

Motor Control Processors

Sensor Interfacing Skills

Virtual Instrumentation

Embedded System Design for IoT Applications

Design and Analysis of Control Systems

IIoT for Process Industries

HMI Programming using SCADA

Data Analytics in Process Industries

Cyber Security for Process Industries

Hazard and Risk Analysis for Process Plants

Product Conceptualization and Prototyping

PCB Design Using Cad Tools

RTL Design and Synthesis

Digital Signal Processors

x86 and ARM Processors

Network and Communication:

Transmission Lines & Waveguides

RF System Design

Optic Fiber Network Infrastructure

WIFI Network Planning & Design

Computer Network through LAN / WAN

Firewall in Computer Network

Control Systems

VLSI Design

Mobile Phone Assembly and Component Inspection

Programming and Software Development:

Java with Springboot

Mernstack

Mobile Application Development

Scientific Computing Using Matlab

Power BI

Data Visualization Techniques

Interactive Website Design

Web Programming Skills

Blender

Open CV

Unity

Natural Language Processing Techniques

Speech Recognition Techniques

Food and Polymer Industry

Sustainable Food Product Development

Food Plant Layout and Design

Mind to Market Strategies

Good Manufacturing Process & Validation

Basics of PLC

Introduction to PLM

Solid State Characterization

Ceramic Testing and Quality Control

Data Analytics for Polymer Industries

Low Voltage Switch gear

Ceramic Additive Manufacturing

CNC Turning - Operation and

Advanced Modelling & Kinematics

Mould Flow and Product Simulation

Plastic Injection Mold Simulation and Analysis

Advanced Simulation Process

Motion Simulation

Software for Robotics

Hands-on Training in CNC and Robotics

Data Science Fundamentals

Digital Twin

Data Visualization Techniques

Business Process Optimization

Machine Learning Algorithms

Solid Modelling

Additive Manufacturing and Mechanical Design

3D Printing using NX

Additive Manufacturing

CATIA

Packaging Simulation

Product Design and Manufacturing - 3D Surface Modelling

Foundation Skills in Integrated Product Development (Product Development)

ANSYS

E TABS- Extended Three-dimensional Analysis of Building Systems

Hyper works

Design and construction of Steel Buildings

Communication and Networking

4G/5G Communication Networks

CCNA - II

CCNA (Cisco Certified Network Associate)

Network Essentials

Operation research

Convergence (Analysis Software)

Data Science and Analytics

Big Data

Business Analytics

Data Visualization Techniques

EBPL (IoT, Data Science, Data Analytics, Artificial Intelligence)

Project Based Experiential Learning (AI/Data Analytics and Visualisation/Front End Development/ Software Testing)

Project Management using JIRA

Cloud Computing and Cybersecurity

Cloud Computing and Management

Cloud Essentials

Cyber Forensics

Ethical Hacking

Quantum Computing with Black Opal

DevOps

Docker

Digital Skills and General Skills

Digital Skills

Communication English

Employability Skill Course

English Language Skills for Employability

Soft skills for 2nd year

UI and UX Design

Design Thinking

Embedded Systems and Electronics

Embedded System Design

IC Chip Design and Verification

Programmable System - on - chip Architecture for ARM Cortex- M0 devices

EBPL (Software for Product, Design Thinking, Prompt Engineering, VLSI)

High Level C language application

Electrical and Electronic Vehicles

ADAS ECU Simulation and Testing

Electric and Hybrid Vehicles

Electric Vehicle Charging System Design

Electric Vehicle Technology and Manufacturing

EV Drive and Control

EV Embedded System & ADAS

EV Powertrain & Integration

FLA- Full Load Amperes

Enterprise Solutions and Business Management

Sales Force Developer

SAP Tools

Serve pack

Entrepreneurship

Six sigma

Business Analytics

Logistics

Software Development and Programming

Full Stack Development- Mongo DB

Full Stack Development with JAVA

Full Stack with Python Programming

Full Stack AI Tools

Django Framework

Oracle Apex

Prompt Engineering

Image and Graphic Design

Photoshop

Logo Design

Cinematography courses

Robotics and Industrial Automation

Robotic Process Automation & Development (RPAD)

Industrial Automation

Mobile Robots Development

MATLab

Image Processing

Building and Geographic Information Systems (GIS)

AVN- GIS Software

GIS

Energy Efficient Buildings (Green Cement, Sustainability)

Revit

Regulations and standards of biomedical devices

Physics and Simulations

Thermal related skill based course

High Performance Computing technology

POLYTECHNIC COURSES:

Sector	Domain	Broad Career Path	Course	Relevant Job Roles
IT/ITES	CS/IT	Cloud Computing and Infrastructure	Cloud Computing	Cloud Technician, Junior Cloud Administrator
IT/ITES	CS/IT	Network and Cabling Solutions	Information Network Cabling	Network Cabling Technician, IT Support Assistant
IT/ITES	CS/IT	Business Software Solutions	IT software solutions for business	Business Software Support, IT Assistant
IT/ITES	CS/IT	Mobile Application Development	Mobile application development	Junior Mobile App Developer, Application Support Technician
IT/ITES	CS/IT	Web Development	Web Technologies	Web Technician, Junior Web Developer
IT/ITES	CS/IT	Cybersecurity	Cyber Security	Cybersecurity Technician, IT Security Assistant
Electronics and Hardware	ECE/EEE	Mobile Robotics	Mobile Robotics	Robotics Assistant, Robotics Technician
Electronics and Hardware	ECE/EEE	Robotics and System Integration	Robot systems integration	Robotics Integration Technician, Systems Assistant
IT/ITES	CS/IT	Game Design and Digital Art	3D digital game Art	Junior Game Designer, 3D Art Technician
Manufacturing	Mechanical	Additive and Advanced Manufacturing	Additive Manufacturing	3D Printing Technician, Manufacturing Assistant
Construction	Civil	Masonry and Construction	Bricklaying	Bricklaying Expert
Construction	Civil	Digital Construction	Digital Construction	Digital Construction Technician
Manufacturing	Mechanical	Industrial and Product Design	Industrial Design Technology	Industrial Design Assistant, Product Design Technician
Manufacturing	Mechanical	Mechanical Design and CAD	Mechanical engineering Design CAD	CAD Technician, Mechanical Design Assistant
Construction	Civil	Tiling and Finishing Work	Wall and floor tiling	Tiling and Flooring Expert
Construction	Civil	Concrete and Structural Work	Concrete construction work	Structural Construction Expert

LIST OF COURSES SECTORWISE

Construction:

Bricklaying

Digital Construction

Wall and floor tiling

Concrete construction work

Electronics and Hardware:

Mobile Robotics

Robot systems integration

IT/ITES:

Cloud Computing

Information Network Cabling

IT software solutions for business

Mobile application development

Web Technologies

Cyber Security

3D digital game Art

Manufacturing:

Additive Manufacturing

Industrial Design Technology

Mechanical engineering Design CAD