



Rural Development Department

Rural Development Department

- Established in 1978-79 to implement the centrally sponsored Scheme of Community Polytechnics

VISION

To be a Centre of Excellence for promoting education, training, research and providing extension services in the area of rural development through effective implementation of Scheme of Community Development Through Polytechnics and other Programmes of Government of India.

MISSION

- To organize education and training programmes in the area of rural development for the faculty and staff of technical education system and rural development organizations for upgradation of their knowledge and skills.
- To organize education and training programmes in the area of rural development, and sustainable development for the students of Masters in Rural Development/Management, Rural Technology.
- To develop instructional materials in the area of rural development to increase the effectiveness of teaching-learning process.
- To provide extension and consultancy services to MSDE, MoE, DTEs, technical and higher education system organizations working for rural development.
- To undertake research and development in the field of rural development.
- To extend services to MSDE, MoE and AICTE in formulating policies pertaining to rural and skill development.

STCs - Key Areas

- Appropriate technologies and its transfer
- Unnat Bharat Abhiyan
- Organic farming
- Swachh Bharat Abhiyan : Role of Technical Institutions
- Orientation to Community Development Through Polytechnics Scheme
- Clean and Green Energy Sources
- National Skill Qualification Framework and Skill Development Schemes
- Innovative Approach towards Green and Sustainable Buildings
- Earthquake Risk Management for Rural and Urban Housing

STCs - Key Areas

- Technologies for Sustainable Rural Development
- Integrated Village Development
- Watershed Management for Sustainable Development
- Climate Change, Disaster and Pandemic Management
- Role of Technical Institutions in Sansad Adarsh Gram Yojana
- Mentoring Rural Youth for Start-Up and Entrepreneurship
- Skill Development for Employment Generation
- Sustainable Development and Natural Resources Management
- Research Areas in Science and Technology

STCs - Key Areas

- Role of Technical Institutions in Integrated Village Development
- Environmental Protection and Sustainable Development
- Unnat Bharat Abhiyan and Application of Technology
- Environment, Energy and Sustainable Development
- Renewable Energy Sources
- Sustainable Development and Clean Technologies
- Affordable Housing in Disaster Prone Areas
- Energy Conservation and Management
- Technical and Vocational Education of the Differently Abled Persons

STC Details

	Contact Mode		ICT Mode	
Year	No of programs	No of teachers trained	No of programs	No of teachers trained
2020-21 (April to November,2020)	-	-	12 (Online)	799
2019-2020	13	258	4	466
2018-2019	15	395	2	247
2017-2018	10	214	3	512
2016-2017	10	264	2	428

External faculty involved in the Institute programs

[Short Term Programs]

Name of Expert	Organization	Area of Expertise
Dr Swati Samwatsar	Water Research Institute, Jalgaon	Integrated Village Development, Participatory Planning, Development of Women and tribes
Er. Milind Pandit	Water Research Institute, Jalgaon	Earth Dams, Rainwater Harvesting structures
Dr V K Vijay	IIT Delhi	Unnat Bharat Abhiyan, Bio-gas technology
Dr. Vivek Kumar	IIT Delhi	Unnat Bharat Abhiyan, Water Treatment
Dr Priyanka Kaushal	IIT Delhi	Unnat Bharat Abhiyan, Innovative Projects
Dr Ram Chandra	IIT Delhi	Unnat Bharat Abhiyan, Bio-gas technology

External faculty involved in the Institute programs

[Short Term Programs]

Name of Expert	Organization	Area of Expertise
Dr. HK Sardana, Chief Scientist	CSIR- CSIO, Chandigarh	Assistive technology, Grain analyzing, Image processing
Er. MP Singh, Director	Punjab Energy Development Agency, Chandigarh	Renewable energy sources, GoI Schemes
Dr. BK Bhansod, Principal Scientist	CSIR- CSIO, Chandigarh	Agriculture and sensors, smart farming
Dr. Ashok Sharma CEO	CleanTech International Foundation, Shimla	Clean technologies, Natural Resource minimization in industries
Dr. Siby John, Professor	Punjab Engineering College, Chandigarh	Air pollution and its mitigation

External faculty involved in the Institute programs

Name of Expert	Organization	Area of Expertise
Dr. AV Ravi Teja	IIT, Ropar	Renewable Energy, Wind Energy, Electric Vehicle
Er. Surjit Singh, MD	Solar Age, Chandigarh	Solar PV Technologies
Ms. Jagpreet	NABARD	Self-help Group, Micro-finance schemes
Er. Anu Singla	Certified Energy Auditor	Energy efficient Measures in Domestic sector & Industry
Dr. Anil Kohli	Certified Energy Manager	Energy Conservation, Energy audit
Dr. LN Sharma, Professor	Punjab Engineering College, Chandigarh	GIS and its applications

External faculty involved in the Institute programs

Name of Expert	Organization	Area of Expertise
Er. Balkar Singh, Joint Director	Punjab Energy Development Agency, Chandigarh	Energy conservation, Green Buildings ECBC
Er. Money Khanna, Project Engineer	Punjab Energy Development Agency, Chandigarh	Green Buidings, ECBC, Green Buildings
Arch. Jit Kumar Gupta, Former Director	College of Architecture, IET, Bhaddal	Green Buildings and its ratings
Dr. Ram Kumar, Principal Scientist	ICAR-Indian Institute of Soil & Water Conservation Research Centre , Chandigarh	Horticulture
Dr. Pawan Sharma, Principal Scientist	ICAR-Indian Institute of Soil & Water Conservation Research Centre , Chandigarh	Sloping land water management, Agro forestry

External faculty involved in the Institute programs

Name of Expert	Organization	Area of Expertise
Jagat Singh Jaglee	Rudra Prayag	Mixed Forest Management, Climate Change and Disaster Management
Gaurav Sharma	Aroma Farm, Padaul, Near Mullanpur	Permaculture
Joginder Singh	Rohru, Himachal Pradesh	Organic Apple Production
Bharat Bhushan Tyagi (PadmShree Awarded)	Bulandshahar, UP	Organic Agriculture
Ram Saran Verma	High Tech Farm, Daulatpur, Barabanki	High Tech Horticulture

Instructional Material Developed

Type	Description	Nos.
Print	Books	5
	Lab Manual	1
	Charts	7
Non-Print	Educational Video Films	57

Instructional Materials developed

Print – Books/Lab Manual/Charts

Authors	Title	Year
Dr. K Gopal Iyer and Dr. U N Roy	Watershed Management and Sustainable Development	2005
Dr. UN Roy	People's Participation in Watershed Management	2005
Poonam Syal/UN Roy/Amit Goyal	Charts on Rural Technologies (Improved Chulha, Biogas Plant, Solar Still, Low Cost Housing, Smokeless Chulha, Solar Dryer, Pulse Dehusker)	2006
Dr. JS Saini, & Amit Goyal	Empowering the Disabled	2009
Dr. UN Roy and Dr. J S Saini	People's Empowerment and Sustainable Rural Development	2009
Dr. Poonam Syal & Jyothi PM	Lab Manual for Instrumentation for Environmental Engineering	2017
Dr. UN Roy & Dr. Amit Goyal	Skill Development and Technology for Sustainable Rural Development in India	2019

Instructional Materials developed

Educational Video Films

Title	Faculty/Team	Year
Solar Technologies	Poonam Syal/ETV Team	2014
Biomass Utilization	Poonam Syal/ETV Team	2014
Skilling India – An initiatives of Govt. of India	Poonam Syal/ETV Team	2014
Research in Engineering & Science – An Overview	Poonam Syal/ETV Team	2016
Biomass Energy Resources	Poonam Syal/ETV Team	2016
Aspects of Earthquake Engineering	Amit Goyal/ETV Team	2018
Codal Provision for Earthquake Resistance building	Amit Goyal/ETV Team	2017
Eco-friendly technology-A way ahead	Amit Goyal/ETV Team	2017

Instructional Materials developed

Educational Video Films

Emerging areas of research in sustainable development	Poonam Syal/ETV Team	2016
Intellectual Property Rights	Poonam Syal/ETV Team	2017
Significance of Renewable and Clean Energy Technologies	Poonam Syal/ETV Team	2017
Glimpses of Scheme of Community Development through Polytechnics	JS Saini/Poonam Syal/ETV Team	2013
Innovation, Invention and IP Rights	Poonam Syal/ETV Team	2018
Bio-gas Technology	U N Roy /GB Pandey	1996-97
Tractor: Shaping Path for Agriculture	U N Roy /G B Pandey	1999-2000

Instructional Materials developed

Educational Video Films

Title	Faculty/Team	Year
Energy For All	Prof. SK Chopra/ Poonam Syal/ETV Team	2013 (NCTEL)
Carpentry Tools	Prof. SK Chopra/ Poonam Syal/ETV Team	
Agricultural Implements	Prof. SK Chopra/ Poonam Syal/ETV Team	
Village and Small Industries (English, Hindi)	Prof. SK Chopra/ Poonam Syal/ETV Team	
Rural Housing	Prof. SK Chopra/ Poonam Syal/ETV Team	
Solar Water Heating System	Prof. SK Chopra/ Poonam Syal/ETV Team	

Instructional Materials developed

Educational Video Films

Title	Faculty/Team	Year
Disability A Challenge	JS Saini/ETV Team	2013
A Cultural Evening With a Difference	JS Saini /ETV Team	2013
Technical Education and Career Opportunity for Women	JS Saini/ETV Team	2013
Scheme of Community Development through Polytechnics	JS Saini/ETV Team	2013
Viklangta Proksh Ya Pratyaksh (Hindi)	JS Saini/ETV Team	2013
National Skill Qualification Framework	JS Saini/ETV Team	2014
Technical and Vocational Education for Disabled	JS Saini/ETV Team	2014
Implementation of NSQF	JS Saini/ETV Team	2015

Instructional Materials developed

Educational Video Films

Title	Faculty/Team	Year
Solar Technologies	Poonam Syal/ETV Team	2014
Biomass Utilization	Poonam Syal/ETV Team	2014
Skilling India – An initiatives of Govt. of India	Poonam Syal/ETV Team	2014
Research in Engineering & Science – An Overview	Poonam Syal/ETV Team	2016
Biomass Energy Resources	Poonam Syal/ETV Team	2016
Aspects of Earthquake Engineering	Amit Goyal/ETV Team	2018
Codal Provision for Earthquake Resistance building	Amit Goyal/ETV Team	2017
Eco-friendly technology-A way ahead	Amit Goyal/ETV Team	2017

Educational Video Films

An Introduction to PRA/RRA Techniques	U N Roy AshutoshKapila	2002-03
PRA/RRA Techniques	U N Roy AshutoshKapila	2002-03
PRA/RRA Techniques and Micro Planning	U N Roy AshutoshKapila	2002-03
Vermiculture -Messengers of Nature(Hindi, English)	U N Roy AshutoshKapila	2004
Towards Organic Farming (Hindi, English, Punjabi)	U N Roy AshutoshKapila	2004
Towards Sustainable Agriculture	U N Roy AshutoshKapila	2005

Educational Video Films

Organic Farming : An Enterprise (Hindi)	U N Roy AshutoshKapila	2006
Organic Farming : Vocation for Women (Hindi)	U N Roy AshutoshKapila	2007
Agricultural Waste Management for Sustainable Agriculture (English)	U N Roy G B Pandey	2008
Krishi Awashesh Prabandhanwa Sthayi Krishi (Hindi)	U N Roy G B Pandey	2008
SadbaharKheti LayiRehand-khund di Sarva- pakhi Barton (Punjabi)	U N Roy G B Pandey	2008
Role of grass-root leaders in Sustainable Development	U N Roy AshutoshKapila	2009

Educational Video Films

Climate Change and Sustainable Development	U N Roy AshutoshKapila	2010
DeenBandhu Bio-gas Plant	U N Roy AshutoshKapila	2010
Face to Face with Ice man	U N Roy AshutoshKapila	2010
Mixed Forest by Jagat Singh Janglee	U N Roy AshutoshKapila	2012
Sustainable Agriculture	U N Roy AshutoshKapila	2015
Appropriate Technologies for Sustainable Development	U N Roy	2016
Gaon Ke Vikas Kee Disha	U N Roy AshutoshKapila	2017

Educational Video Films

PRA/RRA and Micro Planning	U N Roy AshutoshKapila	2018
Organic Farming	U N Roy AshutoshKapila	2018
Rural Marketing	U N Roy AshutoshKapila	2018
Organic Farming and Marketing	U N Roy GB Pandey	2019
Strategies for Sustainable Rural Development	U N Roy GB Pandey	2019
Initiatives of NITTTR Chandigarh in Unnat Bharat Abhiyan	U N Roy	2019

Educational Video Films

Innovative Farming and Permaculture	U N Roy GB Pandey	2019
Gaon ke Sthayee Vikas ke Dagar	U N Roy H D Mishra	2019
Innovative Projects for Rural Development	U N Roy H D Mishra	2019
Techniques of Organic Farming	U N Roy H D Mishra	2019
Initiatives of NITTTR Chandigarh and Himachal Pradesh Government	U N Roy H D Mishra	2019
Techniques of Organic Farming	U N Roy	2020

Educational Video Films

Techniques of Permaculture and Natural Farming	U N Roy And Gaurav Sharma	2020
Climate Change, Disaster and Pandemic Management	U N Roy	2020
Strategies for Pandemic Management	U N Roy	2020
Watershed Management	U N Roy	2020
Rural Enterprise and Rural Start Up	U N Roy	2020

Curriculum Development

Team	Description
RD Faculty	<p>25 Nos. - Curriculum for Skill Development Programs</p> <p>(Field of Electrical – Electrician, House wiring, Motor winding, Transformer coil rewinding, Repair of electrical gadgets , Civil and other Vocational trades – Jute bag making, Soft Toys making, Embroidery, Garment making, Beautician, Batik making, Textile printing, Fabric Painting, Leather goods making, Handloom weaving, Doll making, Knitting etc.)</p>

Consultancy Services



Ferrocement Technologies under CDTF Scheme
By Anar Devi Khandelwal Mahila Polytechnic, Mathura



Fabrication of a Ferro-cement Roof top for a Toilet under transfer of technology by Anar Devi Khandelwal Mahila Polytechnic, Mathura at village Chaumuha, Chhatikara near Vrindavan



Fabrication of low cost roof using local materials like bamboo and gunny bags



Construction of a smokeless chullah under transfer of technology by Anar Devi Khandelwal Mahila Polytechnic, Mathura at village Chaumuha, Chhatikara near Vrindavan

Consultancy Services

PI/Team	Title of Project	Client	Amount	Year of grant of project
Dr. U N Roy/Dr. Poonam Syal/ Dr. Hemant Vinayak/ Dr. Amit Goyal	Unnat Bharat Abhiyan (Regional Coordinating Institute & Participating Institute)	MHRD, GoI	Rs. 10.00 Lakhs + 0.50 Lakhs	2019
Prof. Sanjay Sharma & Prof. Poonam Syal	Green Skill Development Program on Sustain and Enhance Technical Knowledge in Solar Energy Systems	Ministry of Environment, Forest and Climate Change	Rs. 10.20 Lakhs	2019-20
Prof. Sanjay Sharma & Prof. Poonam Syal	Green Skill Development Program on ETP/STP/CETP operation and maintenance	Ministry of Environment, Forest and Climate Change	Rs. 10.60 Lakhs	2019-20

Consultancy Services

PI/Team	Title of Project	Client	Amount	Year of grant of project
Prof. Sanjay Sharma & Prof. Poonam Syal	Green Skill Development Program on Sustain and Enhance Technical Knowledge in Solar Energy Systems	Ministry of Environment, Forest and Climate Change	Rs.9.93 Lakhs	2018-19
Prof. Sanjay Sharma & Dr. Poonam Syal	Capacity building Workshops for implementing Punjab ECBC	Punjab ECBC, PEDDA.	Rs.13.50 Lakhs	2017-2018
Prof. Sanjay Sharma, Dr. Poonam Syal	Clean Technology Exposition	Dept. of Scientific & Industrial Research, Delhi	1.50 Lakhs	2015-16

Consultancy Services

PI/Team	Title of Project	Client	Amount	Year of grant of project
Prof. JS Saini, Dr. Poonam Syal, Dr. UN Roy	4th National Abilympics	National Abilympic Association of India, Delhi	Rs. 16.50 Lakhs	2014-15
Dr. U N Roy	Students Training 05 of Training Programs Organised.	174 MBA Students trained	Rs. 2.50 Lakh	From 2015 to 2019

Research Projects



Wastewater Disposal System: Village Chaukpuri, UP



Photo-remediation

Smokeless Chulha –
Siswan Village, UP



Gosthi at Village Chaukpuri



Research projects received (Last 15 Years)

PI/Team	Title of Project	Sponsoring body	Amount	Year of grant of project	Status [Completed/ in progress]
Dr. J S Saini , Dr. UN Roy, Dr. BS Pabla	Bioenergy: Technology and Business Solutions for UK and India, under Science Bridge Programme in collaboration with IIT Delhi and Aston University, UK,	IIT Delhi under India – UK Project	Rs. 21.25 Lakhs	2008 – 2013	Completed
Dr. U N Roy, Dr. JS Saini	Eco-water Literacy and Sanitation Campaign	DST, GoI	Rs. 15.20 Lakhs	2008 - 2013	Completed

Job Fairs for Persons with Disability

- Persons with disabilities were offered jobs in hospitality, retail, BPO, IT and manufacturing sector
- Companies in which candidates placed- Domino's , IBM, IT Park, Competent Synergies Pvt. Ltd., Lemon Tree Hotels, Tech Mahindra, Jubilant Food Works Pvt. Ltd., Fortis Healthcare Ltd. etc.



Job Fairs for PWDs

Year	Placed PWDs candidates
2010-11	53
2011-12	39
2012-13	65
2013-14	77
2014-15	57
2015-16	59
2017-18	67

MOUs signed with industry/other organisations

Name of Industry/Organization	Salient Points of MOU
Himachal Pradesh University, Shimla	For PhD program
State Institute of Rural Development and Panchayat Raj (SIRD&PR), Govt. of Tamil Nadu, Maraimalainagar	Training, Carrying out Research & Consultancy Services for Rural Development

Faculty contribution in Extension services

Team	Name of Project	Beneficiary
Rural Development Faculty	Guidance/Assistance to the institutions implementing the Scheme of Community Development Through Polytechnics [CDTP] for Rural Development Activities (155 institutions)	MoE/MSDE/DTEs/CDTP
	Assistance to MSDE/MoE for in implementing the Scheme of Community Development Through Polytechnics (155 Institutions in 8 States and 1 UT)	
	Assistance to States of Northern Region for the Scheme of Community Development Through Polytechnics [CDTP] (8 States and 1 UT for 155 institutions)	

Conferences/Seminars organized

Conferences/Seminars/National Workshops

16



Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Dr. U N Roy and Dr. JS Saini	National Seminar on “Empowering the Masses through Technology Application and Skill Training” 01-02 Dec 2005	218 Participants participated in the seminar from 22 states. 71 papers in 7 technical sessions were presented
Poonam Syal and Dr. J S Saini	National Workshop on Evolving Roadmap for Scheme of Community Development Through Polytechnics, 25-26 November, 2009	85 Participants participated
Dr. U N Roy and Dr. J S Saini	National Seminar on “Climate Change and Sustainable Development: Regional and Grassroots Initiatives” 04 – 05 March 2010 at NITTTR Chandigarh	144 persons participated from 20 states

Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Dr. U N Roy and Dr. J S Saini	National Seminar on “Prospect and Challenges of Sustainable Agriculture and Organic Farming in India” 24 – 25 March 2011 at NITTTR Chandigarh	120 persons participated from 12 states
Dr. U N Roy and Dr. J S Saini	National Seminar on “Sustainable Development of Rural India by Year 2022” 7 – 8 March 2013, organized by NITTTR Chandigarh,	180 Participants participated in the seminar including 40 farmers and entrepreneurs participated in Organic and Herbal Product Mela

Conferences/Seminars organized

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Dr. U N Roy and Dr. J S Saini	National Seminar on “Prospect and Challenges of Sustainable Agriculture and Organic Farming in India” 24 – 25 March 2011 at NITTTR Chandigarh	120 persons participated from 12 states
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Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Dr. S K Dhameja and Dr. U N Roy	International Seminar on“TVET for Sustainable and Inclusive Development: Current Practices and Emerging Issues of Sustainable Development” 30 th May 2013, Jointly Organized by NITTTR Chandigarh and CPSC Manila	85 Participants including 17 international participants
Dr. U N Roy and Dr. J S Saini	National Convention on Organic Farming, organized by the Department of Rural Development, NITTTR Chandigarh with few NGOs from 28 Feb to 2 nd March 2015,	About 2200 farmers participated in the programme in the campus and about 1000 joined the programme online at five centres in the country.

Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Prof. Sanjay Sharma and Dr. Poonam Syal	International Conference on Educational Futures , 18 – 19 November, 2016 at NITTTR, Chandigarh in collaboration with NERI Neohumanist Education And Research Institute	32 papers presented and 90 participants attended the conference
Dr. U N Roy and Dr. Amit Goyal	Golden Jubilee National Seminar on “Promotion of Skills and Technologies and Technologies for Sustainable Rural Development in India” from 31 st August to 1 st September, 2017 at NITTTR, Chandigarh	105 participants attended from various parts of the country.
Dr. Arvind Kumar Bhatt and Dr. U N Roy	National workshop on “Organic Farming” at IIHS, Shimla on 23rd March 2018 in which H E. Shri ArchayaDevwrat, Hon’ble Governor, HP State inaugurated the function.	700 participants participated in the workshop.

Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Dr. U N Roy	National Workshop on “Role of Technical Institutions in SansadAdarsh Gram Yojana” organized by NITTTR Chandigarh in collaboration with AICTE New Delhi on 26 th June 2018 at NITTTR Chandigarh	217 Participants from the Technical Institutions participated in the workshop.
Dr. U N Roy and Dr. Poonam Syal	Regional Workshop on “Unnat Bharat Abhiyan” (Mission Developed Nation) was organized by NITTTR Chandigarh and IIT Delhi on 1 st August 2018 at NITTTR Chandigarh.	70 participants (nodal officers and faculty members) from Chandigarh, Punjab and Himachal Pradesh States participated in the workshop.

Conferences/Seminars organized

Seminar Co-ordinators	Title of Seminar/Conference	Description
Dr. U N Roy, Dr. Poonam Syal	National Seminar on “Unnat Bharat Abhiyan: Prospects and Challenges” was organized by NITTTR Chandigarh on 28 – 29 November 2019	150 participants participated in the seminar. 40 papers presented
Dr. U N Roy	National Conclave on Entrepreneurship and Rural Development Conclave, Organised by NITTTR Chandigarh on 18 th December 2019	100 people participated in the Conclave. Hon’ble Shri Bangaru Dattatreya, Governor HP was the chief guest

Students Training Organised

Year	Description	Duration	No of Students
2015 - 16	Pre-Job Training of MBA (Rural Management) Students-IIIrd Semester on “Integrated Village Development” from IIHS, HP University, Shimla	18 Jan – 10 th Feb 2016	39
2016 - 17	Pre-Job Training of MBA (Rural Management) Students-IIIrd Semester on “Integrated Village Development” from IIHS, HP University, Shimla	15 – 31 January	21
		06 – 21 Feb 2017	19
2017-18	Pre-Job Training of MBA (Rural Management) Students-IIIrd Semester on “Integrated Village Development” from IIHS, HP University, Shimla,	15-31 January 2018	26
	Pre-Job Training of MBA (Rural Management) Students- Ist Semester on “Management Techniques and Technologies for Sustainable Rural Development” from IIHS, HP University Shimla	05-21 February, 2018	31
2018 - 19	Pre-Job Training of MBA (Rural Management) Students- 2 nd Semester Of Institute of Integrated Himalayan Studies, HP Univ., Shimla on the topic “Management Techniques and Technologies for Sustainable Rural Development”	11-23 February, 2019	38

Major Achievements



Providing extension services to the Persons with Disabilities through the Scheme for Integrating Persons with Disabilities in the Mainstream of Technical and Vocational Education.

In recognition of the exemplary work done by the institute for the empowerment of the PWDs, the institute was conferred the **National Award for the Empowerment of the PWDs by the Hon'ble President of India on 3.12.2013**

- A network with 155 polytechnics was developed and about one lakh persons were trained per annum under CDTP Scheme of the Government of India
- Integrating Persons with Disabilities (PWDs) in the mainstream of Technical and Vocational Education in 15 polytechnics/institutions in Northern region
- Liaison with all state DTEs of Northern Region for effective implementation of CDTP Scheme
- Linkage with the MOE (erstwhile MHRD) and MSDE, GoI



Training Programme on Automobile Engineering is in progress under CDTP Scheme at Govt Polytechnic College, Sundernagar (HP)



Closing of Short Term Courses in Distt. Jail, Jind
Courses : Data Entry Operator, Modern Stitching cum Cutting & Tailoring



Faculty Profiles

Name	Highest Qualification	Date of Joining	Research Areas
Dr. Poonam Syal Professor	PhD (Faculty of Engineering & Technology) Panjab University, Chd	11.02.1986	Renewable energy sources, Rural Development, Assistive technology, Appropriate technology, Environment and Sustainable Development
Dr. Upendra Nath Roy Professor	PhD (Faculty of Arts) Panjab University Chandigarh	19.05.1995	Watershed Management, Organic Farming, Integrated Village Development, Climate Change and Disaster Management
Dr. Hemant Kumar Vinayak Associate Professor (Joint Faculty)	Ph.D (Civil Engineering-Earth Quake Engineering) IIT, Roorkee	19.12.2019	Technical, Rural and Women Entrepreneurship, MSME Set up and Management, Business Startup, Engineering Management, Skills Promotion & Rural Artisans Development, Retail Business Management.
Dr. Amit Goyal Assistant Professor (Joint Faculty)	PhD (Earthquake Engineering) IIT, Roorkee	05.06.2006	Structural Engineering, Structure Dynamics, Earthquake Engineering, Affordable and Green Buildings, Non Destructive testing techniques

Patents Filed

Team/Faculty Name	Patent Description	Filed/Published
Dr. Poonam Syal, Dr. S Chatterji, Dr. HK Sardana	Spatial tactile apparatus and method for creation and navigation of virtual graphics for visually challenged	1739/DEL/2012, Published on 31 August 2016
Dr., Amit Goyal, Dr. Pankaj Agarwal	Earthquake resistant visco-elastic energy dissipator link elements, in the name of Indian Institute of Technology, Roorkee	Application no. 201711014897, dated. 27.04.2017

Papers Published

Faculty Name	No of Research Papers			Google Scholar Index
	SCI	SCOPUS	Others	
Dr. Poonam Syal	2	11	40	Citations-200 h-index - 4
Dr. U N Roy	-	4	4	Citations - 69 h-index - 4
Dr. Hemant Kumar Vinayak	5	5	9	Citations - 161 h-index - 5
Dr. Amit Goyal	2	-	4	Citations - 8 h-index - 2

Vidwan portal profiling

Faculty Name	Vidwan Id
Dr. Poonam Syal	171212
Dr. U N Roy	171087
Dr. Hemant Kumar Vinayak	171113

PhD Guided

Guide	Student	Title of Research work	Year of completion
Dr. Sanjay Sharma & Dr. Poonam Syal	Balkar Singh	Development of criteria for net zero energy building in composite Climate Zone	Thesis submitted in September, 2020
Dr S S Gill, Geology Department PU Chandigarh and Dr U N Roy	Harishchand	Evaluation and Impact Study of Integrated Watershed Management Programme for Sustainable Development in Himachal Pradesh	2012
Dr Hemant Kumar Vinayak	Suresh Kumar Walia	Structural Health Assessment of Bridges using modal parameters	2016
Dr Hemant Kumar Vinayak	R N P Singh	Comparative study of Seismic Design Methods for Bridge Piers	2016
Dr Hemant Kumar Vinayak (Co-Supervisor)	Vandana Sharma	Improving durability of adobe walls for enhancing vernacular architecture	2016

ME Thesis Guided

Name	No of ME Thesis Guided
Dr. Poonam Syal	11
Dr. UN Roy	5
Dr. Hemant Kumar Vinayak	17
Dr. Amit Goyal	3

International Exposure

- **Dr. Poonam Syal** presented paper - An Electrooculogram Signal based Control System in offline Environment by Babita, Poonam Syal, Preeti Kumari , presented during International Conference on Medical Information and Bio Engineering (ICMIB 2017) indexed by Scopus and Ei Compendex, **Barcelona, Spain, Oct. 9-11, 2017**
- **Dr. Poonam Syal** presented paper - Energy conservation opportunities in institutional buildings – A case study in India by Ashmita Rupal, Poonam Syal, Sanjay Sharma , presented during IEEE International Conference on Power and Renewable Energy (ICPRE 2016) held at **Shanghai, China, 21 to 23 October, 2016**
- **Dr. UN Roy** presented paper on “Technological Interventions for Rural Development: An Experiment by NITTTR Chandigarh and IIT Delhi” in international workshop on Bio-energy Business Solutions under Science Bridge Project of India and UK , Aston University, **Birmingham, UK from 2nd to 7th July, 2012**
- **Dr. UN Roy** presented paper “Creation of Organic Farmers Market at Chandigarh, India by NITTTR Chandigarh” in International Conference on "Agro-ecology Transforming Agriculture & Food System" at **Nairobi, Africa from 18-21 June 2019**

- **Dr. UN Roy**, Buyankhisig Nyamaa et al presented paper “TVET for Socio-economic and Environmental Transformation in Asia Pacific Region” in International Conference on “Innovations in TVET for Socio-economic Development” Organised by DEAN, CTVET, Nepal and CPSC Manila at **Kathmandu, Nepal** from 4-5 **October 2018**
- **Dr. UN Roy** and Hussain Jeevakhan, presented paper “TVET Accreditation System in India - An Approach to Train the Youth with Quality as per International Standard ” in International Conference on “Innovation in TVET for Socio-economic Development” 4th and 5th **October, 2019, held at Kathmandu Nepal**, Organized by CPSC Manila and DEAN, CTVET, Nepal
- **Dr. Amit Goyal** participated in Malaysian Technical Cooperation Programme (MTCP 2019) on “Enhancement train the trainer programme towards IR4.0. in Malaysia. 3rd Sept. 2019 to 20th Sept. 2019 in Malaysia
- **Dr. Amit Goyal** participated in Workshop on CDIO on Advancing, Innovating and Sustaining at Singapore during 12-14 September, 2017.

Unique achievements



Dr. Poonam Syal

Awarded for Excellent Paper IEEE International Conference on Power and Renewable Energy (ICPRE 2016) held at Shanghai, China, 21 to 23 October, 2016.

Green Technologies

Dr. Poonam Syal – Nodal Officer for
Solar Technologies in the institute



Green NITTTR Campus

- 50 kWp Solar PV grid-interactive Power Plant at Roof top of Homi Bhabha Block
- 35 kWp Solar PV Power Plant (15 kWp grid-interactive & 20 kWp stand alone with battery bank) at rooftop of Sir JC Bose Block
- Solar PV Street Lights in the institute campus
- 1000 lpd Solar Water Heaters at rooftops of each hostel
- 200 lpd Solar Water Heaters installed at rooftops of houses in the NITTTR campus
- LED Lights in the institute

Unique achievements

Dr. Poonam Syal

- Certificate of Appreciation for invaluable contribution during the conduct of the In-country Programme on Development of Competency based Curricula and Instructional Material for Service Sector conducted from 11 to 22 November, 2002, organized by Colombo Plan Staff College for Technician Education, Manila, Philippines in collaboration with Technical Teachers' Training Institute, Chandigarh
- Educational video film on “Energy for all” won Special Judges prize in 1990 Sony Video Contest, Japan (Prof. SK Chopra/Poonam Syal/ETV team)

Alumni Activities

Dr. Poonam Syal – Chairperson – Alumni Activities



Er. K.K. Dhiman, GM, National Highway Authority of India, Chief Guest at 7th Alumni Meet – 6th October, 2018



Er. K.K. Kataria, Director, Department of Technical Education, Haryana, Chief Guest at 8th Alumni Meet – 1st November, 2019

Association in Committees

Dr. Poonam Syal

- Member, Advisory Committee, Punjab ECBC Cell, PEDDA, Chandigarh
- RDC member in Faculty of Engineering & Technology, Panjab University, Chandigarh
- Member of Board of Studies in M.E. Electrical Engineering (Instrumentation and Control) Panjab University , Chandigarh
- Member of Board of Studies in M.Tech (Instrumentation) Panjab University, Chandigarh

Unique achievements



Dr. UN Roy

Hon'ble Governor of UP Shri Ram Naik awarded Dr U N Roy with appreciation letter for contribution in Rural Development in Bijnor, UP on 5th June 2017

Unique achievements

Dr. UN Roy

- Establishment of Chandigarh Organic Farmers Market in 2015. Its nurture for two years till 2017. Subsequently market is functioning independently under an Association - CHAI (Chandigarh Holistic Agriculture Initiatives) formed by a group volunteers and farmers.
- 13 April 2017, AICTE and CMAI, Asia awarded Dr U N Roy for his contribution in Rural Development activities in 2nd National Punjab Education Summit and Award
- 23 March 2018, Hon'ble Governor Himachal Pradesh Shri Acharya Devwrat felicitated Dr U N Roy for his contribution in Organic Farming in Punjab

Unique achievements



Dr. Amit Goyal

- Young Concrete Engineer Award 2016-17 in recognition of innovative project on "Earthquake Resistant Interlinked Block Masonry System with Visco-Elastic Energy Dissipator Links" by Indian Concrete Institute, Chandigarh Center (Chandigarh, Punjab, Haryana, J&K, H.P) and Ultratech Cement, India, 04th March, 2017

Unique achievements

Dr. Amit Goyal

- **Best Paper Award in Structural Engineering**, 2018 in National Conference on Next Frontiers in Civil Engineering-Sustainable and Resilient Infrastructure organized by Department of Civil Engineering, Indian Institute of Technology, Bombay on 30th November -01st December, 2018
- **Gold Prize** under young scientist award under poster session at 6th Annual Conference of the International Society for Integrated Disaster Risk Management, on Disaster Risk Reduction: Challenges and Opportunities for Sustainable Growth from 28-30 October, 2015 Organized by IDReM & TIFAC at New Delhi

National and International role of faculty

Faculty/Team	Activity undertaken	Agencies involved
Prof. Poonam Syal, Prof. UN Roy, Dr. Amit Goyal	Guiding and monitoring the Scheme of Community Development through Polytechnics in northern region	MSDE, MoE(erstwhile MHRD) DTEs of Northern Region, CDTP Scheme implementing Polytechnics
Prof. UN Roy, Prof. Poonam Syal, Dr. Hemant Vinayak, Dr. Amit Goyal	Unnat Bharat Abhiyan Project	IIT Delhi, Higher education Institutes in Punjab State and Chandigarh
Prof. U N Roy	Online one week Training of Nigerian teachers from the polytechnics: Further linkages possible (6 persons) from 20th To 24th April,2020	With the help of Skipper Seils, Bhiwani

National and International role of faculty

Dr. Hemank Kumar Vinayak

Activity undertaken	Agencies involved
Member Expert Committee for Review & Development of Standardized Information, Education & Communication (IEC) material for Earthquake Safety and Preparedness	National Disaster Management Authority
Rapid Visual Screening of Buildings” Training Program to Govt. Engineers as a part of NDMA’s M8.7 1897 Earthquake Scenario Project being implemented by CSIR-NEIST Jorhat, NDMA in association with various north east state Government	National Disaster Management Authority
Participation in the Knowledge Co-creation Program on Disaster Risk Reduction of Building (against Earthquake, Tsunami and Fire) at Tokyo Japan	Japan International Cooperation Agency (JICA).
Attended Regional Workshop on Seismic Risk Reduction at Tehran and Bam.	Asian and pacific Centre for the Dev. of Disaster Information Mgmt (APDIM) of Economic and Social Commission for Asia and the Pacific (ESCAP), Plan and Budget Organization (PBO) Road Housing and Urban Development Research Centre (BHRC) of Islamic Republic of Iran

Major Initiatives in the department

- PhD Programme was started with HP University, Shimla
- Creation and Initializing of Chandigarh Organic Farmers Market
- Working with a network of 155 polytechnics in the north under CDTP Scheme
- Extension and Transfer of Technology under Unnat Bharat Abhiyan in six villages of Bijnor in collaboration with RVIT Bijnor



Major Initiatives in the department

Unnat Bharat Abhiyan

- Five villages - Kakut, Majri, Bari, Hirdapur and Haripur in the Rupnagar District, Punjab, have been surveyed and grassroot needs identified for the interventions under Unnat Bharat Abhiyan



Classrooms and Labs details

Class Room/ Laboratory	Facilities available
Seminar Hall	Smart Class Facilities
Rural Technology Display Centre	Models and charts of various appropriate technologies
Technology Demonstration Yard	Technologies like bio-gas plants, organic farm etc.



Future Plan

New Programmes Proposed

Program	Department	Proposed year of start	No of seats
MBA in Rural Entrepreneurship	EDIC and Rural Development	2022-23	30
PG Diploma in Media Application for Social and Environmental Journalism	Rural Development Department & Media Engineering	2022-23	30
PG Diploma in Energy and Sustainability	Rural Development	2025-26	60
Masters' Degree in Clean Technologies and Sustainable Development	Civil Engineering & Rural Development	2026-27	18

15 years Future Strategic Plan of the Department

- Collaboration with eminent R& D organizations and industries
- Focus on research in emerging areas
- Offer MOOCs programmes in various emerging areas
- Offer multi point entry and exit based programs for corporate professions in alignment with NEP2020
- Strengthening of Department – Faculty and Infrastructure
- Develop educational material for effective teaching learning process
- Upgradation of faculty in emerging areas

External faculty identified for the new programs from Industry/IIT/NITs and other organizations

Name of Expert	Organization	Area of Expertise
Dr. Vivek Kumar	IIT, Delhi	Water Treatment
Dr. AV Ravi Teja	IIT, Ropar	Renewable Energy Technologies, Electric vehicle
Dr. OPS Kholi, Principal Scientist & Head	ICAR-Indian Institute of Soil & Water Conservation Research Centre , Chandigarh	Water conservation, Watershed Management, Horticulture Planning & Development
Dr. Manoj K Tiwari	IIT, Kharagpur	Water Quality Management
Dr. Ram Chandra	IIT, Delhi	Bio-gas Technologies
Dr. Ashok Sharma CEO	CleanTech International Foundation, Shimla	Clean technologies, Natural Resource minimization in industries

Industry tie-up for new programs

Name of Industry	Program	Type of involvement
Havells India Ltd.	PG Diploma in Energy and Sustainability, Masters' Degree in Clean Technologies and Sustainable Development	Expert lecture
Solar World Ltd., Mohali		Expert Lecture, Industrial visit
Eco Paryavaran Engineers & Consultants Pvt. Ltd., Mohali		Expert Lecture, Industrial visit

Future Plan

Community Development (NEP2020)

Smart Green Village

Approach - Technology Intervention for Sustainable Village Development

- enabling education
- healthcare facilities
- quality infrastructure
- local business opportunities
- improving agriculture practices
- improvement in quality of life



Future Plan

Sustainable Rural Development Projects

Community Development (NEP2020) and Atamnirbhar Bharat

- **Rural Entrepreneurships and Start-up**
- **Clean and Green Technologies**
- **Organic Farming**
- **Skills Development and Self Employment**
- **Enabling Online Education**
- **Smart Agriculture System**
- **Climate Smart Agriculture Practices and Innovation**
- **Sanitation and Waste Management**
- **e-marketing**
- **Quality Drinking Water**
- **Rainwater Harvesting and Watershed Management**
- **Rural and Agri-Tourism**