



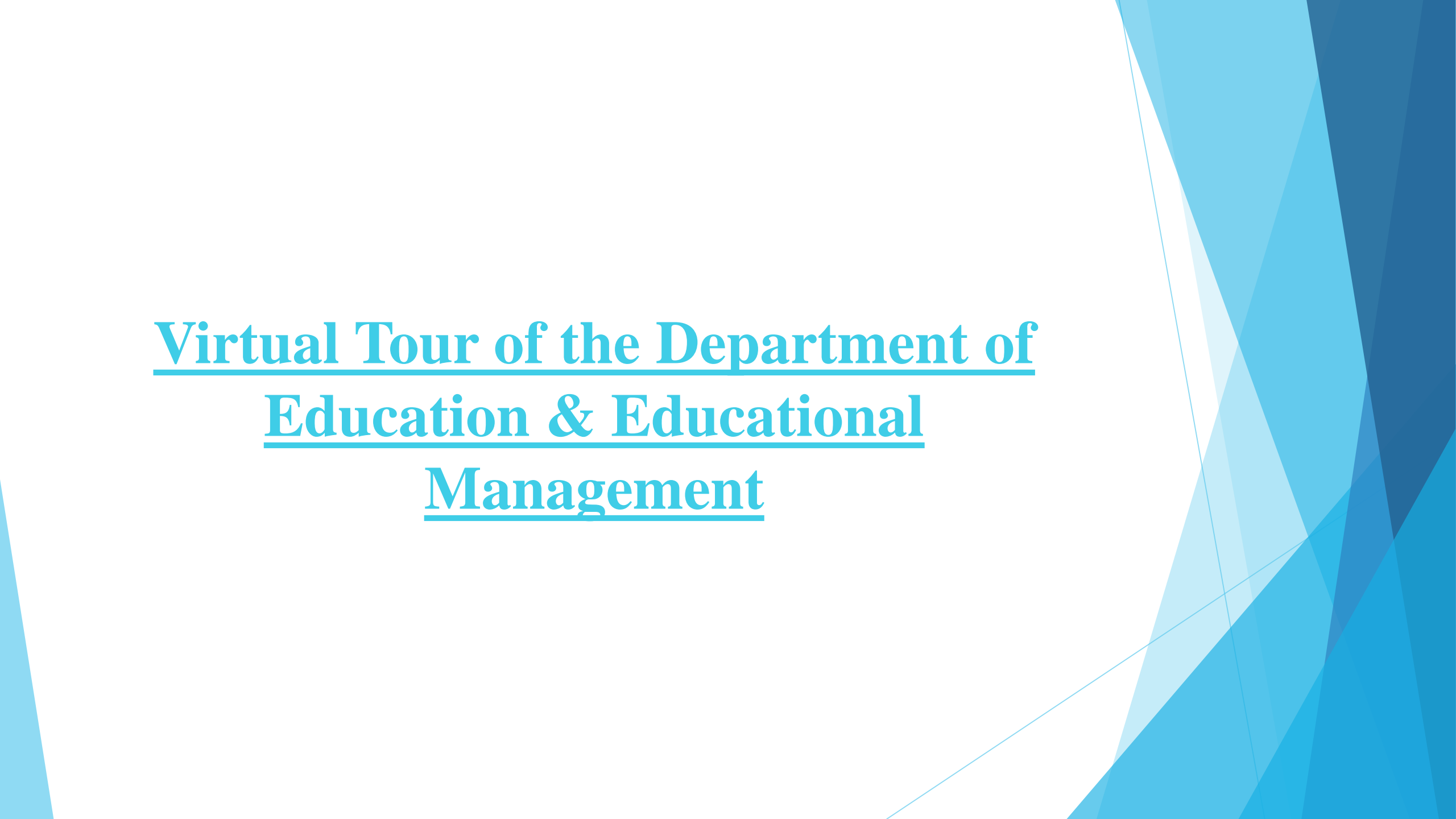
Department of Education and Educational Management NITTTR, Chandigarh

Vision

Department of Education & Educational Management will emerge as a Global Center of Excellence for Education, Training and Research in the areas of Educational Technology & Educational Management

Mission

- ▶ **To offer education and training programmes (both in contact and ICT mode) for improving the professional competencies of teachers and staff of Higher Education Institutions as well as offer management training programmes for the personnel from industry and other organizations.**
- ▶ **To develop instructional material (both Print and Non-Print) to enhance effectiveness of teaching-learning process and to develop MOOCs on Pedagogy and Educational Management.**
- ▶ **To undertake Research and Development projects in Technical Education.**
- ▶ **To provide extension and consultancy services to various stakeholders in the technical education system and other organizations.**

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. The shapes are primarily triangles and polygons, creating a dynamic, modern aesthetic. The text is centered on a white background that occupies the left and middle portions of the frame.

Virtual Tour of the Department of
Education & Educational
Management

Present Programmes & Activities

- ▶ Offer Master's Degree Programme in Engineering Education (M.Tech. in Engineering Education) both on regular and modular mode
- ▶ Design and conduct of Induction Training Programme for Newly Recruited faculty of technical institutions
- ▶ Design and conduct of need-based Short Term Training Programmes for
 - ▶ faculty of technical institutions (Engineering Colleges, Polytechnics, Management Institutes, Pharmacy Colleges etc.)
 - ▶ working personnel from industry and other organizations in the areas of Management
 - ▶ staff of technical institutions (Engineering Colleges, Polytechnics, Management Institutes, Pharmacy institutions, etc.), Directorates and Boards of Technical Education

Present Programmes & Activities

- ▶ **Provide Educational Testing and Evaluation Services to Technical Institutions and Other Organizations**
- ▶ **Undertake Research and Development in Technical Education**
- ▶ **Develop Print and Non-Print Instructional Material**
- ▶ **Offer Extension Services to the Technical Education System and Industries**
- ▶ **Undertake Consultancy Projects related to Technical Education**

Thrust Areas of Training

- ▶ **Higher Education System - Policies, Plans and Govt. Initiatives for Higher Education**
- ▶ **Faculty Induction Training Programme**
- ▶ **MOOCs on Pedagogy, Communication Skills and Research & Development**
- ▶ **Cooperative, Collaborative & Problem Based Instructional Methods to promote meaningful Learning**
- ▶ **Digital Transformation of Teaching**
- ▶ **Instructional Planning and Delivery/Effective Teaching**
- ▶ **Integration of Technology/Social Media Platforms in Instruction**

Thrust Areas of Training

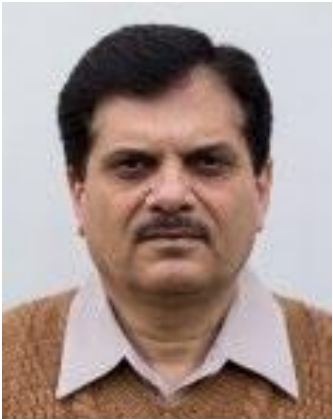

- ▶ **Emerging Trends in Evaluation**
- ▶ **Classroom Communication in Digital Era**
- ▶ **Autonomy and Accountability**
- ▶ **Institutional Management and Evaluation**
- ▶ **Managerial Skills including Leadership Development**
- ▶ **Generic/ Employable Skills/Life Skills**
- ▶ **Career Guidance and Counseling**
- ▶ **Enhancing Performance of Staff**
- ▶ **Research Methodology (including SPSS)**

Strengths

The background features abstract, overlapping geometric shapes in various shades of blue, ranging from light sky blue to deep navy blue. These shapes are primarily located on the right side of the page, creating a modern, dynamic feel. The word "Strengths" is centered in a dark blue, serif font.



Faculty Profiles

Multi disciplinary faculty from Science, Education, Civil Engineering, Chemical/Environmental Engineering background in addition to Ph.D. in Education)

Name	Photograph	Highest Qualification	Date of Joining	Research Areas
Dr. Sunil Dutt, Professor		Ph.D. (Education); M.Sc. (Hons.) Chemistry B.Ed., M.Ed.,	25.11.1992	Educational Technology; Research Methodology; Measurement & Evaluation; Educational Management
Er. PK Singla, Associate Professor		BE (Civil), ME (Civil); Ph.D. (pursuing)	01.08.1985	Civil Engineering; Pedagogy; Curriculum Development; Communication Skills

Faculty Profiles

Multi disciplinary faculty from Science, Education, Civil Engineering, Chemical/Environmental Engineering background in addition to Ph.D. in Education)

Name	Photograph	Highest Qualification	Date of Joining	Research Areas
Er. Rama Chhabra, Associate Professor		BE (Chemical Engineering), ME (Chemical); Ph.D. (pursuing)	04.09.1992	Information Management; Curriculum Development
Er. Amandeep Kaur, Assistant Professor		BE (Chemical Engg.), ME (Environmental Engg.); Ph.D. (pursuing)	09.07.2014	Environment Engg.; Waste water treatment using nanotechnology Assessment tools, Pedagogy, Classroom Communication, Student centered method of instructions


Online Training Material through SWAYAM

Dr. Sunil Dutt



**Development of
Self Learning
Material**

 **784 participants**

 **4.8 out of 5**

*Massive open online courses
were launched in SWAYAM
portal and completed during
2018-19*

** Dr. Sunil Dutt and Er. Amandeep Kaur
were Co-coordinators*

Dr. PK Tulsi



*** Research in
Technical
Education**

 **981 participants**

 **4.4 out of 5**

Online Training Material through SWAYAM

Dr. Sunil Dutt



Development of
Self Learning
Material

 1218 participants



*Massive open online courses
were Re-Run in SWAYAM
portal and completed during
2019-20*

** Dr. Sunil Dutt and Er. Amandeep Kaur
were Co-coordinators*

Dr. PK Tulsi



* Research in
Technical
Education

 1490 participants



Online Training Material through SWAYAM

Dr. Sunil Dutt



Development of
Self Learning
Material



2829 participants



*Massive open online courses
were RE-Run in SWAYAM
portal and completed during
2020-21*

** Dr. Sunil Dutt and Er. Amandeep Kaur
were Co-coordinators*

Dr. PK Tulsi



* Research in
Technical
Education



592 participants



AICTE-NITTT MODULES through SWAYAM

AICTE-NITTT EIGHT MODULES were launched in SWAYAM portal and completed during 2019-20

Er. Amandeep Kaur



**Communication Skills,
Modes & Knowledge
Dissemination**



10030 participants

Dr. PK Tulsi



*** Creative Problem
Solving, Innovation and
Meaningful R & D**



4147 participants

Dr. Rakesh K Wats



**** Institutional
Management and
Administrative
Procedures**



3014 participants

** Dr. Sunil Dutt as a
Co-coordinator
** Dr. Sunil Dutt as a
Co-coordinator*

Classroom and Laboratory Detail

Class Room/ Laboratory	Approximate Cost of Equipment/ software	Facilities/equipment available
Classroom	Rs. 8.0 lakhs	19 PCs; 01 Professional LED Display with integrated Touch Screen; Statistica; SPSS
	Rs. 0.5 lakhs	Standardized Tests (Psychological and Management)
Communication Laboratory	Rs. 20.0 lakhs	Hardware: Projection System, Video Camera, Amplifier/PA System, Rostrum: Presentation and Speech, 31 PC's with Headphones, whiteboard etc.
	Rs. 5.0 lakhs	Software: Language Lab software; Study Skills Success; Sky Pronunciation; Talking Dictionary; ISLETS/TOFEL Material

Department Library

- ▶ **No of Books : 70**
- ▶ **Ph.D. thesis Reports : 34**
- ▶ **M.E thesis Reports : 72**
- ▶ **R&D Study Reports : 20**
- ▶ **Learning Material : 100**
- ▶ **Psychological Tests : 20**
- ▶ **Management Tests : 20**

New Equipment Purchased (last 5 years)

Year of Purchase	Name of Equipment	Cost (in Rupees Including all taxes and duties)
2019-20	Nil	-
2018-19	-One APC Back-ups, 600VA -5 HP Desktop 600G3-SFF	2,950/- 2,45,000/-
2017-18	-One HP Laserjet Printer M 227 SDN MFP -One HP Probook 440GS Business Notebook	25,472/- 71,950/-
2016-17	-One HP Laserjet Pro M226 DN MFP	19,950/-
2015-16	-5 HP Business Desktops -Electronic Lectern, Model GEL 19P -Professional LED display with integrated touch screen -One HP Business Desktop 4056 G1 -Two HP Laptops of DGS&D RC	2,69,855/- 1,71,861/- 5,46,042/- 51,401/- 1,22,430/-

Achievements during Last 5 years

Short Term Courses

Year	No. of programs (Contact Mode)	No. of teachers trained	No. of programs (ICT Mode)	No. of teachers trained
2019-20	23	703	05	460
2018-19	17	422	07	988
2017-18	23	368	04	479
2016-17	24	527	03	1012
2015-16	18	387	03	213
Total	105 (including 2 weeks)	2407	22	3152

Achievements

Long Term Courses

▶ **Total M.E. produced during last 15 years : 46**

In addition to M.Tech. Engineering Education, the subjects like Research Methodology, HRD & Training Methods, Project Planning & Management, and Technology Management are offered to other ME programmes of the institute)

▶ **Total Ph.D. Guided till date : 34**

External faculty/industry experts involved in the Institute programs [Long Term and Short Term Programs]

Name of Expert	Organization	Area of Expertise
Dr. Sanjeev Chaddha	Professor, Mahatma Gandhi State Institute of Public Administration, Sector 26, Chandigarh	Educational Management
Dr. Suresh Kumar Sharma	Professor, Department of Statistics, PU, Chandigarh	Statistics (SPSS)
Dr. Sanjeev Kumar Sharma	Professor, UIAMS, PU, Chandigarh	Educational Management
Mrs. Suditi Jindal	Philyra Training & Consultancy, SCO 23, Sector 33D, Chandigarh	Communication Skills
Dr. Archana Singh	Professor, Department of Communication, Panjab University, Chandigarh	Educational Technology and Communication Skills
Dr. Sushil Kumar Kansal	Professor, Dr. SS Bhatnagar ICET, Panjab University, Chandigarh	Research Methodology
Dr. Archana Mantri	Pro-Vice Chancellor, Chitkara University, Rajpur	Educational Technology
Er. AK Upadhyaya	Retired Addl GM & Head HRD, BHEL, Haridwar	Educational Management
Dr. HS Cheema	CEO, Cheema Boilers, Ropar	Industrial exposure to faculty
Er. Sudhir Maingi	MD, Magbro Healthcare Pvt. Ltd., Baddi	Industrial exposure to faculty

Conferences/Seminars organized

- **National Conference on ‘Technical & Vocational Education & Training in India: Challenges & Opportunities’** on 17.03.2017 in collaboration with Colombo Plan Staff College, Manila at NITTTR, Chandigarh
- **National Seminar on ‘ICT in Technical Education’** from 06 – 07 Sept., 2012 at NITTTR, Chandigarh
- **National Seminar on ‘Research in Higher Technical Education’** from 25-26 February, 2010 at NITTTR, Chandigarh
- **National Seminar on ‘Academic Autonomy’** from 15-16 October, 1996 at NITTTR, Chandigarh

No. of Curriculum Designed (Till Date)

Title	Year	Beneficiary
Master of Engineering Education	1992	All States
M.Tech. Engineering Education	2005	All States
Skill Development Certificate Courses in 10 areas	2011-12	All States
MOOC on ‘Development of Self Learning Material’	2018-19	All States
MOOC on ‘Research in Technical Education’	2018-19	All States
AICTE-NITTT Module 3: ‘Communication Skills, Modes and Knowledge Dissemination’	2019-20	All States
AICTE-NITTT Module 7: ‘Creative Problem Solving, Innovation and Meaningful R & D’	2019-20	All States
Higher Level Module on ‘Virtual Education & Assessment’; ‘Learning Analytics’ and ‘Case Studies and Problem Mapping’	2020-21	All States

Instructional Materials Developed

E content and videos

- ▶ AICTE-NITTT MOOC Module 3: Material on **‘Communication Skills, Modes and Knowledge Dissemination’**
- ▶ AICTE-NITTT MOOC Module 7: Material on **‘Creative Problem Solving, Innovation and Meaningful R & D’**
- ▶ AICTE-NITTT MOOC Module 8: Material on **‘Institutional Management and administrative Procedures’**
- ▶ MOOC Course Material on **‘Development of Self Learning Material’**
- ▶ MOOC Course Material on **‘Research in Technical Education’**

Instructional Materials Developed

Print Material

- ▶ **No. of Text Books : 13**
- ▶ **Course Material : 100**

Non-print Material

- ▶ **No. of CAI Packages : 5**
- ▶ **No. of Video Films : 200**

Research Papers Published

No. of Research Papers

- ▶ **SCI** : **5**
- ▶ **SCOPUS** : **5**
- ▶ **Others** : **90**

Faculty Contribution in Extension Services

Team	Name of Project	Beneficiary	Year
Dr. Sunil Dutt	RTI Act, 2005 – As a Nodal Officer and CPIO responsible for replying RTI Applications; submission of quarterly reports	All States	2005 till date
EMGT Faculty	Engaging Sessions in Programmes of various institutions	All States	Every year
Dr. Sunil Dutt/ Er. Amandeep Kaur/ Dr. PK Tulsi	Development of Four MOOCs	All States	2018-2020
EMGT Faculty	Impact Studies on Technical Education System	All States	
EMGT Faculty	Career Guidance Programmes (Four)	1000 students of Govt. Polys at Bathinda, Hoshiarpur, Amritsar and BBSB Poly., Fatehgarh Sahib participated	2009-10
EMGT Faculty	Expert for various Interview Boards, Board of Studies, etc.	Several Organizations	2005-20
EMGT Faculty	Keynote Speakers/ Chairpersons in various Seminars/Conferences	Several Organizations	2005-20

Consultancy Projects during last 15 Years

- ▶ **No. of Projects** : **46**
(Sponsored Research Projects, Recruitment, etc.)
- ▶ **Total Amount** : **Rs. 16,77,19,037**

Major Achievements

- ▶ **Developed and launched four MOOCs**
- ▶ **Initiated offering Training Programmes on Online mode in Educational Technology & Educational Management**
- ▶ **Conducted series of Workshops on Setting Question Papers for faculty of State Board of Technical Education for various States**
- ▶ **Offered M.Tech. Engineering Education (Modular) Programme during 2005 – 2013**
- ▶ **Compiled Abstracts of R & D Studies as well as Theses of various ME Programmes of the institute as a document ‘Glimpses of Research’**
- ▶ **Organized a number of Study Visits of Principals/Senior faculty of polytechnics at Bhopal, Mumbai, Ahmedabad, Vadodora (1997), Parwanoo & Solan (2002), Hyderabad & Chennai (2007), Cochin & Bangalore (2008).**

Major Achievements

Detail of a few R & D Studies

- ▶ **Assessment of Faculty working in both Government and Private polytechnics under the State Council for Technical Education & Vocational Training, Govt. of Odisha**
- ▶ **VSAT enabled MELT: An evaluation study**
- ▶ **Utilization Study of EDUSAT Network in Haryana**
- ▶ **A study on Causes and Remedial Measures for high failure rate in first year diploma programmes in polytechnics of Delhi State**
- ▶ **A Study on the Factors Contributing to Students Indiscipline in the Polytechnics of Haryana State**
- ▶ **Determining Internal Efficiency for the Polytechnic of Delhi**
- ▶ **Impact of MoU Between DTEIT Punjab, ITI Rajpura and MOI Engineering Limited, Mohali, on ITI Rajpura - A Case Study**
- ▶ **Design of Organizational Structure for the Punjab State Board of Technical Education and Industrial Training**

Major Achievements

Detail of a few R & D Studies

- ▶ **Impact of Induction Training Programmes for polytechnic teachers on teaching of theory subjects**
- ▶ **Impact of WBAP on Strengthening of Technician Education for Andaman & Nicobars Islands and prepared the National Report**
- ▶ **Determining Internal Efficiency for the Polytechnic of Delhi**
- ▶ **Design of Organizational Structure for the Punjab State Board of Technical Education and Industrial Training**
- ▶ **Scheme of Introducing Autonomy in Polytechnics of Jammu & Kashmir**
- ▶ **Factors Contributing to Burnout of Teachers in Polytechnics of Haryana**
- ▶ **Determining the Manpower Spectrum of Technician Engineers in Public/Private Sector Industry**
- ▶ **Effect of Microteaching on Teaching Competencies of Teacher Trainees**

Major Achievements

Detail of a few R & D Studies

- ▶ **Perceptions of students of Polytechnics in Haryana State towards System of Evaluation**
- ▶ **A Study of the Factors affecting Motivation of students in Polytechnics of Haryana**
- ▶ **A study of Utilization of Institutional Resources like Space, Equipment, Libraries, Learning Resources etc.**
- ▶ **Perception of students regarding Strategies for enhancing Employability of graduates from Technical Institutions: Quality of Instruction; Student Evaluation; Research in Engg. & Technology & Technical Education; Teacher as a Counselor**
- ▶ **A Study of Initiatives taken by Technical Institutions for Developing Soft Skills among Students**
- ▶ **Impact Study of national Conferences/Seminars organized by various departments of the institute for last seven years**
- ▶ **Impact of Massive Open Online Courses (MOOCs) on Higher Education**

Major Achievements

Detail of a few Ph.D. Thesis

Guide	Student	Title of Research work	Year of completion
Dr. Sunil Dutt	Richa Bansal	Effect of Webquest Instruction on achievement in Science in relation to Critical Thinking and attitude towards Learning Science	2014
Dr. Sunil Dutt	Preeti Thakur	Effect of Problem Based Learning on achievement and retention in relation to achievement motivation and attitude towards biology of IX graders	2014
Dr. Sandhir Sharma/ Dr. Sunil Dutt	Salil Dey	A study of Quality Management Practices in Electronics Industries in northern India	2013
Dr. ML Ohri/ Dr. Sunil Dutt	Er. Jagroop Singh	Evaluating the Feasibility and Effectiveness of Problem based Learning Approach in Engineering Education at Indian Polytechnics	2013
Dr. SP Bedi/ Dr. Sunil Dutt	Manpreet Kaur	Burnout among secondary school teachers in relation to Eysenck Personality dimensions and Attitude toward Teaching	2013
Dr. GS Sodhi/ Dr. Sunil Dutt	Jasvir Kaur Dhaliwal	Attitude of women teachers towards teaching profession as related to Values, Self-Actualization, Job Satisfaction & Burnout	2012
Dr. Sunil Dutt/ Dr. Renu Verma	Navdeep Kaur Chatha	A study of Mental health, Self-concept and Burnout of polytechnic teachers in relation to Organizational Climate	2012
Dr. Sunil Dutt/ Dr. HS Bajwa	Meenakshi Gupta	Effectiveness of Cognitive Strategies as Remedial Treatment on Learning Disabled in relation to Emotional Intelligence and Anxiety	2012
Dr. JP Gupta/ Dr. Sunil Dutt	Er. Archana Mantri	The effect of direct and Problem Based Learning instruction in Electronics & Communication Engineering	2010

Major Achievements

Detail of a few M.Tech. Engineering Education

Guide	Student	Title of Research work
Dr. Sunil Dutt	Savita	Learning Styles and Academic Achievement of First Year Engineering Students in Applied Mathematics in Chandigarh University, Gharuan
Dr. PK Tulsi	Ratan Kumar Ghosh	A Status Study of Instructional Processes at Diploma Level Courses in Civil Engineering in the Polytechnics of Assam
Dr. SP Bedi	Soju S.S.	Effectiveness of Instructional Strategies used for Life Skills Course at Diploma Level in the State of Kerala: Teachers & Students Perceptions
Dr. Sunil Dutt	Manoj Kumar	Effectiveness of Concept Mapping on Achievement of Students in Textile Chemistry
Dr. PK Tulsi	Saroj Kumari	Personality Learning Styles and Performance of Students in Various Disciplines of Engineering in Lucknow
Dr. Sunil Dutt	GVG Yugandhar	Study of Human Factors in Aircraft Maintenance
Dr. SP Bedi	Aditya Prakash Mishra	Effectiveness of Collaborative Learning for Teaching Basic Manufacturing Processes Courses
Dr. SP Bedi	Vinita Gahlot	Perception of Students Regarding Websites of the Polytechnic Colleges in Rajasthan

Unique Achievements

- ▶ Developed digital content (e-content and video recorded lectures)
- ▶ Developed a **Communication Laboratory** equipped with 31 PCs & Headphones, Projection System and Software for providing consultancy and guidance to institutions/organizations as well as conducting training programmes on **Communication Skills and Soft Skills**
- ▶ As a community service, EMGT faculty conducted/participated in **Blood Donation camps** organized at NITTTR, Chandigarh
- ▶ Organized FDPs in the areas of **‘Stress Management’** and **‘Leading from Within and Managing your Ego’** keeping in view their physical and mental well-being
- ▶ Conducted training programmes for non-teaching staff of technical institutions and personnel from industries (JCT Ltd., Mohali, Eicher Tractors, Parwanoo, etc.) /other organizations (SCL, Mohali, NIPER, Mohali, etc.)
- ▶ Organized a number of training Programmes for teachers from Bangladesh (1999 and 2000), Sri Lanka (1999) and Bhutan (2018).

National and International Role of Faculty

Faculty/Team	Activity undertaken	Agencies involved
Er. Amandeep Kaur	Participated in 3 day In-country CDIP workshop (19-21 April, 2016) at NITTTR, Chandigarh	Temasek Foundation, Singapore Polytechnic, Singapore
Dr. Sunil Dutt	Participated in CDIO Workshop on ‘Advancing, Innovating and Sustaining CDIO’ at from 08 – 10 December, 2015 at Singapore	Singapore Polytechnic, Singapore
Dr. Sunil Dutt	Prepared two papers (jointly) and presented the same; <u>one</u> on ‘Use of ICT for Professional Development of Educators of TVET’ and <u>second</u> on ‘Emerging Challenges for developing TVET Educators in India’	International Conference on ‘Preparing TVET Educators for the Next Generation’ from 12 – 13 December, 2011 at Kuala Lumpur, Malaysia
Dr. PK Tulsi	Two papers were presented: ‘Experience of Offering MOOC on Research in Technical Education for Teachers and Lessons Learnt’ (PKT) and, second ‘Student Readiness for Online Learning in relation to Gender and Stream of Study’ (PKT & AK)	IEEE Conference on ‘Learning with MOOCs 2019: Enhancing Workforce Diversity and Inclusion, 23-25 October, 2019, Milwaukee, WI, USA

Budget Details (Allocation and Utilization) last 5 years

Year	Budget allotted	Budget Utilized
2019-20	1.00 Lakh	---
2018-19	1.00 Lakh	2,47,950/-
2017-18	0.85 Lakh	97,422/-
2016-17	0.70 Lakh	19,950/-
2015-16	3.50 Lakh	11,61,589

New Programmes Proposed

Program	Proposed year of start	No of seats
PG Diploma in ‘Teaching in Digital Age’	2021-22	30
PG Diploma in ‘Institute Project Planning & Management’	2022-23	30
PG Diploma in ‘Institutional Resources Management’	2023-24	30
M.Tech. Engineering Education	2023-24	30
Ph.D. in Engineering Education	2023-24	02

Uniqueness in New Programmes Proposed

Program	Uniqueness
PG Diploma in 'Teaching in Digital Age'	Candidates with Post Graduate in any discipline are eligible in the course. The course will equip the faculty with input to: Develop and integrate technology to support teaching learning; Assess & online-evaluate learning
PG Diploma in 'Institute Project Planning & Management'	The course will be of one year duration. Candidates with Post Graduate in any Discipline are eligible in the course. The course will equip the faculty with input to: Identify a project, specify its goals and objectives, analyse the network and determine project completion time and indicate the critical path on the network
PG Diploma in 'Institutional Resources Management'	Candidates with Graduate in any Discipline are eligible in the course. Planning, availability and management of resources is one of the most important activities of any institute. The course will equip the faculty with input to: Plan and manage various institutional resources

Uniqueness in New Programmes Proposed

Program	Uniqueness
M.Tech. Engineering Education	The Programme is not offered in any Indian University except at NITTTR, Chandigarh in affiliation with PU, Chandigarh till 2013. Candidates with Graduation in Engineering, Architecture; Or Post Graduation in Applied Sciences, Pharmacy and Management are eligible in the course. The programme, with 70 Credits, will develop professional capabilities amongst the faculty related to: Teaching, management, evaluation, curriculum development, instructional material development, research, entrepreneurship development, rural development etc. thereby enhance their professional and career development for improving the effectiveness and efficiency of the technical education system, etc.
Ph.D. in Engineering Education	The course will be as per UGC Guidelines. Any Post Graduate in Engineering, Applied Sciences, Architecture, Pharmacy and Management is eligible in the course as per UGC Guidelines. The Programme is not offered in any Indian University. The scholars will conduct research in inter-disciplinary areas (Engineering and education)

PG Diploma in 'Teaching in Digital Age'

- Study & Evaluation Scheme

Code No	Course of Study	Hours			Credits	Marks		
		L	P/T	Total		Internal Assessment	University Examination	Total
Semester I								
TDA 101	Understanding Teaching	3	2	4	4	50	50	100
TDA 102	Fundamental Change in Education	3	2	4	4	50	50	100
TDA 103	Understanding Technology in Education	3	2	4	4	50	50	100
TDA 104	Assessment & Evaluation	3	2	4	4	50	50	100
Semester Total					16	200	200	400
Semester II								
TDA 105	Teaching with Technology: In Campus	3	2	4	4	50	50	100
TDA 106	Teaching with Technology: Off Campus	3	2	4	4	50	50	100
TDA 107	Project Work	-	20	20	10	50	-	50
Semester Total					18	150	100	250
Grand Total					34	350	30	650

PG Diploma in 'Institute Project Planning & Management'

- Study & Evaluation Scheme

Code No	Course of Study	Hours			Credits	Marks		
		L	P/T	Total		Internal Assessment	University Examination	Total
Semester I								
IRM 101	Institutional Resource Management	3	2	4	4	50	50	100
IRM 102	Management of Information System	3	2	4	4	50	50	100
IRM 103	Human Resource Management	3	2	4	4	50	50	100
IRM 104	Financial Management	3	2	4	4	50	50	100
Semester Total					16	200	200	400
Semester II								
IRM 105	Manufacturing Resource Planning	3	2	4	4	50	50	100
IRM 106	Project Management and Managerial Skills	3	2	4	4	50	50	100
IRM 107	Project Work	-	20	20	10	50	-	50
Semester Total					18	150	100	250
Grand Total					34	350	30	650

PG Diploma in 'Institute Project Planning & Management'

- Study & Evaluation Scheme

Code No	Course of Study	Hours			Credits	Marks		
		L	P/T	Total		Internal Assessment	University Examination	Total
Semester I								
IPM 101	Dimensions of Institute Project Planning & Management	3	2	4	4	50	50	100
IPM 102	Need & Goal Analysis and Project Schedule Development	3	2	4	4	50	50	100
IPM 103	Resource, Budget and Risk Management	3	2	4	4	50	50	100
IPM 104	Project Implementation and Evaluation	3	2	4	4	50	50	100
Semester Total					16	200	200	400
Semester II								
IPM 105	Managerial Skills	3	2	4	4	50	50	100
IPM 106	Communication Skills and Project Report Writing	3	2	4	4	50	50	100
IPM 107	Project Work	-	20	20	10	50	-	50
Semester Total					18	150	100	250
Grand Total					34	350	30	650

M.Tech. Engineering Education - Study & Evaluation Scheme

Code No	Course of Study	Hours			Credits	Marks		
		L	P/T	Total		Internal Assessment	University Examination	Total
Semester I								
MTE 101	Educational Technology	3	2	4	4	50	50	100
MTE 102	Research Methodology	3	2	4	4	50	50	100
MTE 103	Curriculum Development & Student Evaluation	3	2	4	4	50	50	100
Elective Subject (Any One of the following)								
MTE 104	Education Project Planning & Management	3	2	4	4	50	50	100
MTE 105	Technology Management	3	2	4	4	50	50	100
Semester II								
MTE 106	HRD & Training Methods	3	2	4	4	50	50	100
MTE 107	Entrepreneurship Development	3	2	4	4	50	50	100
MTE 108	Micro Teaching	-	4	4	2	50	-	-
Elective Subjects (Any Two of the following)								
MTE 109	Web Based Training & Development of MOOC	3	2	4	4	50	50	100
MTE 110	Institutional Climate & Organizational Behaviour	3	2	4	4	50	50	100
MTE 111	Teaching in Digital Age	3	2	4	4	50	50	100
Semester III								
MTE 201	Institutional Management & Evaluation	3	2	4	4	50	50	100
MTE 202	Instructional Media Design & Development	3	2	4	4	50	50	100
MTE 251	Preliminary Thesis Work	-	20	20	10	50	50	100
Semester IV								
MTE 252	Thesis Work	-	40	40	20	50	50	100

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

Name of Expert	Organization	Area of Expertise
Dr. Amita Devi	Pro-Vice Chancellor, Indira Gandhi Delhi Technical University for Women, Delhi	Educational Technology/ Educational Management
Sh. Gaurav Kumar	Director, Magma Research & Consultancy Services, Ambala Cantt.	Educational Technology/ Educational Management
Sh. Hitesh Kumar Gulati	Change & Organizational Development Consultant, Zirakpur	Educational Management
Dr. Sanjeev Chaddha	Mahatma Gandhi State Institute of Public Administration, Sector 26, Chandigarh	Educational Management
Dr. Suresh Kumar Sharma	Professor, Department of Statistics, Panjab University, Chandigarh	Statistics (SPSS)
Dr. Nandita Singh	Professor, Deptt. of Education, Panjab University, Chandigarh	Education & Educational Management
Dr. MM Malhotra	Ex-Professor, NITTTR, Chandigarh	Education & Educational Management
Dr. Vidhu Mohan	Ex-Professor, Department of Psychology, Panjab University, Chandigarh	Education & Educational Management
Dr. Archana Singh	Professor, Department of Communication, Panjab University, Chandigarh	Educational Technology and Communication Skills
Dr. Harshleen Kaur	Physiotherapist, HOPE Clinic, Sector 21, Chandigarh	Educational Management

Programmes/Activities planned for next 5 years

- ▶ **Conduct of 35 to 40 need-based Education & Training Programmes in emerging areas (both Pedagogy and Educational Management) every year.**
- ▶ **Conduct of one Training of Trainers programme/workshop every year**
- ▶ **Conduct of 4 to 5 Student Training Programmes every year**
- ▶ **Conduct of UGC/AICTE/ISTE/DST sponsored FDPs for faculty of higher education institutions (2 to 3 every year)**
- ▶ **Development of Online Learning Material (including video films, e-content) for offering Short Term Training through MOOCs (01 to 02 every year)**
- ▶ **Undertake Research & Development (one every year)**
- ▶ **Presentation of at least one paper by each of the faculty per year in a Conference/Seminar**

Programmes/Activities planned for next 5 years

- ▶ **Publication of at least one paper by each of the faculty per year in quality journals**
- ▶ **Organization of at least one (in five years) National Seminar/Conference in the emerging areas of Educational Technology, Educational Management and Engineering Education**
- ▶ **Starting a new PG Diploma in ‘Teaching in Digital Age’**
- ▶ **Starting a new PG Diploma in ‘Institute Project Planning & Management’**
- ▶ **Starting a new PG Diploma in ‘Institutional Resources Management’**
- ▶ **Re-launch of M.Tech. in Engineering Education**

Programmes/Activities planned for next 5 years

Mode of Offering the Programmes

- ❑ Offer web-based professional development programmes in the areas of educational technology and management leading to certification in a phased manner.
- ❑ During the first two years (2020-22), courseware (including e-content and videos & other instructional media) will be developed for two programmes one each in the areas of Educational Technology and Educational Management.
- ❑ The programmes will be offered to faculty of higher education institutions from 2021-22 onwards.
- ❑ In institution based courses, experienced and effective teachers, available at the host institute level, will be involved in organization of the programmes as resource persons.
- ❑ Follow-up study of faculty of higher education institutions trained through Induction Training Programme and Professional Development Programmes will be undertaken to ensure continuous improvement and transfer of learning at workplace.

Programmes/Activities planned for next 5 years

Research & Development

- **Research & Development will be undertaken to improve the effectiveness and efficiency of programmes and activities of the department and higher education system at large.**
 - ❑ **Action research to evolve new models and strategies for professional development of faculty of higher education institutions so as to improve the quality of training in these institutions**
 - ❑ **Research studies in the areas of instruction, evaluation, management processes and practices**
- **HEIs as Innovation Centers: Selected HEIs in the Northern States will be designated as Innovation Centres in consultation with Management/Directorate of Higher/Technical Education. New models, strategies of teaching-learning, evaluation and management processes/practices will be tried-out on pilot basis in these innovation centers. On finding successful results, the innovations will be replicated in other higher/technical institutions.**
- **National level R&D projects in collaboration with other NITTTRs will be undertaken.**

Programmes/Activities planned for next 5 years

Curriculum Development

The curriculum for various subjects of Post Graduate Diploma and Degree Programmes will be reviewed every two years and necessary modifications will be made in accordance with the changing context. In addition, the course content of various training programmes will be reviewed on the basis of needs of the clientele system.

Instructional Material Development

Department will focus on developing courseware for offering web-based professional development programmes in addition to print and non-print instructional material.

Extension & Consultancy Services

Need based extension and consultancy projects in the areas of teaching-learning and evaluation, institutional management and evaluation, testing, policy formulation for higher/technical education will be undertaken.

Programmes/Activities planned for next 5 years

Faculty Training

The faculty of the department will be trained in a phased manner in the following areas:

- ▶ Web-based Learning**
- ▶ Emerging Technologies**
- ▶ Professional Development: emerging models and strategies**
- ▶ Emerging Trends in Teaching-Learning and Evaluation**
- ▶ Software for Management & Research**

15 Year Long Term Plan (2020-2035)

- ▶ A Global Centre of Excellence in the field of in Educational Technology, Educational Management and Engineering Education**
- ▶ Conduct need-based Short Term Training Programs at National and International Levels through ICT mode**
- ▶ Collaborate with International Universities and Institutes for joint R&D activities**
- ▶ Undertake Extension activities and Consultancy Services for the Higher Education System**
- ▶ Publish quality research papers in the SCI/Scopus International Journals**
- ▶ Develop need-based Curricula and Instructional Material**
- ▶ Promote Industry-Institute Interaction in the Emerging Areas**

Uniqueness in Proposed Activities

- ▶ **Custom designed training Programme in the area of management and pedagogy**
- ▶ **Bringing change in education by collaborating with national/international universities**
- ▶ **Providing helping hand to various organizations to strength education system of the nation**
- ▶ **Linkages with industries to prepare students training programmes for students**
- ▶ **Conduct action research to identify challenges faced and suggest strategies to improve education system**

Roadmap to achieve Proposed Activities

- ▶ **Bringing entire functioning of the department under the ambit of e governance**
- ▶ **Transferring teaching learning by using various innovative pedagogy in various STCs**
- ▶ **Creating research facilities at department level and develop learning resource centres**
- ▶ **Offering MOOC programme per faculty every two years**
- ▶ **Strengthening digital education by developing various digital resources / education application software**

Strengthening of Infrastructure

- ▶ **Creation of facilities for integration of ICT (video conferencing, video films etc.) in class rooms**
- ▶ **Software (Authoring tools, SPSS, Management Software)**
- ▶ **Creation of Web based Platforms for offering training programmes**
- ▶ **Psychological Testing Laboratory**
- ▶ **Psychological Tests**

Output

- ▶ **Teachers with proficiency in Instructional Planning, Delivery and evaluation**
- ▶ **Principal, HoDs and senior faculty with proficiency in institutional management**
- ▶ **Students of technical institutions with enhanced confidence in appearing in interviews**

Expected Outcomes

- ▶ **Teachers of higher/technical institutions will be able to plan and deliver instruction effectively in classroom & evaluate students' performance objectively in theory and practical subjects.**
- ▶ **Programmes and activities of the department will equip the faculty of higher education institutions with required knowledge & skills to make teaching learning meaningful which, in turn, will enhance the students' placement.**
- ▶ **Trainers of higher/technical institutions will be able to conduct training programmes in their respective institutions in collaboration with EMGT department.**
- ▶ **Senior faculty of higher/technical institutions will be able to manage their departments/institutions, projects and other activities.**
- ▶ **The higher/technical institutions will be able to reflect quality through R & D in their teaching learning**

Student Centric Achievements/Activities

- ▶ **Organizes 2 to 3 programmes every year for students of technical institutes on ‘Preparing Students for Job Interviews’ wherein about 2000 students participate in every programme**
- ▶ **Organizes Motivational Lectures for students of technical institutions**
- ▶ **On the request of Punjab State Board of Technical Education and Industrial Training, Chandigarh, four Career Guidance Programmes for students of Govt. Polytechnic, Bathinda, Hoshiarpur, Amritsar and BBSB Polytechnic, Fatehgarh Sahib were organized during 2009-10, in which 1000 students participated.**

Weaknesses

- ▶ **Vacant faculty positions (01 Professor, 02 Associate Professor and 01 Assistant Professor) with the result, department could not conduct more Action Research**

Strategy for Overcoming Weaknesses

- ▶ **Effort for making recruitment of required faculty positions**

Link for Virtual Tour of the Department

<https://youtu.be/Ea5qIh4BFqc>

