

**NATIONAL INSTITUTE OF TECHNICAL TEACHERS TRAINING & RESEARCH,
CHANDIGARH**

DEPARTMENT: CIVIL ENGINEERING DEPARTMENT

Sr. No.	Name of STC	O Plan No.	Start Date	End Date	No. of Partipandts	Coordinator
1.	Green and Intelligent Buildings	10	14/04/2020	18/04/2020	118	Dr. Himmi Gupta/sanjay sharma
2.	Advanced Construction Technology	ICTO-63	18/05/2020	22/05/2020	217	Er. Amit Goyal /Dr. Sanjay Sharma
3.	Alternate Technologies in Road Construction (Flexible Pavements)	67	25/05/2020	29/05/2020	93	Er. A. K. duggal
4.	Smart Sustainable Cities	60	25/05/2020	29/05/2020	255	Dr. Himmi Gupta
5.	Emerging Technologies in Civil Engineering	76	08/06/2020	12/06/2020	139	Er. Amit Goyal /Dr. Sanjay Sharma
6.	Affordable Housing	80	22/06/2020	26/06/2020	174	Dr. Sanjay Sharma/ Er. Amit Goyal
7.	Remote Sensing and its Applications in Engineering	94	22/06/2020	26/06/2020	60	Dr. Hemant Sood
8.	Fundamentals of Concrete Technology	114	20/07/2020	24/07/2020	119	Dr. Hemant Sood
				Total	1118	

ME. Class's From June / July 2020. Dr. Sanjay Sharma/ Dr. Hemant Sood / Er. A. K. Duggal/ Er. Amit Goyal

ME Thesis Summited -20

PhD Thesis Summited -01

PhD Work/ M.E Thesis

- Checking of the final draft of Sh. Balkar Singh PhD student under Progress and two M.E Thesis also checked.

Consultancy Projects

Testing of Materials, Design, Quality Control, Third Party Audit of Quality Control Inspection
Stability of Structure NVAL Training Program

Gross Value: 1101316 (+ 5 lacs Proposal Summited)

Energy Efficient and Innovative Building Construction Practices

Lab Practices in Highway Engineering

Innovative Technologies for Village Development

Laboratory Practices in Environmental Engineering

Disaster Managements and Sustainable Development

Fire Resistant Design of Structures

Construction and Maintenance of Black Top Pavements

Structural Design Using STAAD PRO

Programming in Finite Element Method & Its Application to Practical Problems Using ABAQUS

Artificial Intelligence in Civil Engineering

Construction and Maintenance of Black Top Pavements

Testing of Latest Civil Engineering Materials

Advanced Construction Materials and Techniques for Roads, Buildings Bridges & Other Civil Engineering Structures"

Evaluation and Rehabilitation of Pavements

Application of Auto CAD in Engineering

Sustainable Planning for Rural and Urban Development

New Generation Concrete Mixes

Software Applications in Project Management

Quality Control of Concrete

Yoga and Meditation
Concrete Lab Practices
Low Cost Housing Techniques and Practices
Recycling Materials in Highway Construction
Use of Robotic Total Station and GNSS
Repair & rehabilitation of structures
Alternate Technologies in Road Construction
Earthquake Resistant Affordable Housing
Construction Management
Environmental Pollution: Issues and Remedies
Bearing Capacity Estimation for Foundations
Design and Construction of Foundation for Bridges
Lab Practices in Soil Engineering
Computer Aided Analysis of Laboratory and Design Data in Civil Engineering
Slip form work to Construction
Green Buildings and Services

DPR Ist February to 31st July, 2022

Rehabilitation & retrofitting of structures

Energy Efficient and Innovative Building Construction Practices
Lab Practices in Highway Engineering
Innovative Technologies for Village Development
Laboratory Practices in Environmental Engineering
Disaster Managements and Sustainable Development
Fire Resistant Design of Structures
Construction and Maintenance of Black Top Pavements
Structural Design Using STAAD PRO
Programming in Finite Element Method & Its Application to Practical Problems Using ABAQUS
Artificial Intelligence in Civil Engineering
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Evaluation and Rehabilitation of Pavements
Application of Auto CAD in Engineering
Sustainable Planning for Rural and Urban Development
New Generation Concrete Mixes
Software Applications in Project Management
Quality Control of Concrete
Yoga and Meditation
Concrete Lab Practices
Low Cost Housing Techniques and Practices
Recycling Materials in Highway Construction
Use of Robotic Total Station and GNSS

Alternate Technologies in Road Construction
Earthquake Resistant Affordable Housing
Construction Management
Environmental Pollution: Issues and Remedies
Bearing Capacity Estimation for Foundations
Design and Construction of Foundation for Bridges
Lab Practices in Soil Engineering
Computer Aided Analysis of Laboratory and Design Data in Civil Engineering
Slip form work to Construction
Green Buildings and Services
NDT of RCC structures

Course Attended of faculty

1.4 Faculty Development:

Webinars attended:

Achieving concrete Durability: Beliefs, myths, and reality: April 25, 2020 (1 ½ hrs) conducted by Dr, K. Shivakumar DGM L & T Chennai

- I. INJECTION GROUTING FOR CONCRETE WORK: April 23, 2020 (2 hrs) conducted by s. Sheshadr BASF New Delhi.
- II. Water GEMsfor Intelligent water infrastructure by Innovative Systel 24th April .
- III. India Cooling Action Plan; March 26, 2020, Mr Vikram Murthy, President of ISHRAE and organized by ISHRAE. (Indian Society of Heating, Refrigerating and Airconditioning Engineers).
- IV. ICI General Body Meeting as Chairman ICI Chandigarh Centre on 20th April and 13th April 2020.

1.5 Consultancy:

Progress Report: Dr. Sanjay Sharma

Period: April 2020 (lockdown period March 25 - April 25)

Education & Training Programmes

1.1. STC:

1. **One week Online STC "Green and Intelligent Buildings" conducted from 14-18 April 2020. (Oplan No ICTO-10)**

- As Co-Coordinator.
- 118 participants: Teachers of Polytechnics and Engineering Colleges from all over India.
- Registration queries through calls and emails.
- Developing content/Arranging experts.
- Compiling additional reading material and website links for the lecture topics delivered by me.
- Post Lecture queries by participants.

2. **One week Online STC "Environment and Sustainable Technology" conducted from 21-25 April 2020 (Rural Development Deptt. conducted by Dr. Poonam Syal).**

- As subject Expert.
- 100 participants: Teachers of Polytechnics and Engineering Colleges from all over India.
- Compiling additional reading material and website links for the lecture topics delivered by me.
- Post Lecture queries by participants.

1.2. M.E. Programme:

1. **Subject: Environmental Engg. & Management** (These materials have been supplied to all ME students (24 number))

- Study Material developed :

- I. Water Pollution
- II. Noise Pollution
- III. Air Pollution
- IV. Environmental impact assessment

- Assignments (The assignment given on the chapters):

Subject: Building Maintenance

Study Material developed (These materials have been supplied to all ME students):

- I. Waterproofing Materials
- II. Repair of Damp Areas
- III. Repair of RCC elements
- IV. Repair materials

Subject: Green Building and services

Prepared write up of two Chapters as per ME Syllabus

1.3 PhD Work/ M.E Thesis

- Checking of the final draft of Sh. Balkar Singh PhD student under Progress and two M.E Thesis also checked.

1.4 Faculty Development:

Webinars attended:

- Achieving concrete Durability: Beliefs, myths, and reality: April 25, 2020 (1 ½ hrs) conducted by Dr, K. Shivakumar DGM L & T Chennai
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 - VIII. ICI General Body Meeting as Chairman ICI Chandigarh Centre on 20th April and 13th April 2020.
 - 1.5 Consultancy:
 - I. Stability report For MES Ambala Cantt And RBI Chandigarh

Summited to Proposal for Creation of common Research and Technology Development Hub in Environmental Interventions.

Progress Report: Hemant Sood

Period: April 2020 (lockdown period March 25 - April 25)

As desired it is informed that first draft of video script on Abrasion testing of concrete has been completed.

Research Paper Publication

Mathematical Modelling of Resilient Response of Fibre Reinforced Clay Subgrade for Pavement Design (Dr.HS, Dr.Gaurav Gupta, Dr. Pardeep Gupta) 2. RBI Grade 81 Commercial Chemical Stabilizer for Sustainable Highway Construction.

Progress Report: Ajay Duggal

Period: April 2020 (lockdown period March 25 - April 25)

Education & Training Programmes

1.1 STC:

- Conducted: nil

[Course Material preparation: under progress w.r.t. Construction of Roads]

1.2 M.E. Programme:

Subject: Advanced Construction Technology

- Study Material developed :
 - I. Pre –Fab Construction : New (1st draft)
 - II. Slip Form Construction (12 pages)- New
 - III. Composite Materials
 - IV. Geo-Synthetics and their Applications in Civil Engineering (prepared as online resource material using reader contents and updating)

These materials have been supplied to all ME students (24 nos)

- **Assignments:**

One assignment given on the chapters Pre Fab Construction and Composite Materials ; submission done through e mail, checked and returned with comments and evaluation marks.
- **Evaluation /Test**

One online test conducted on chapter of Geo-Synthetics. (Kahoot portal was used)
- **Consultancy:**

Renewal of Roads: under MOU with MC Chandigarh ; provided renewal designs for 6 nos roads ; also received a payment of Rs 2,61,960 /- towards 1st instalment (on 26.03.2020)

Progress Report: Ajay Duggal

Period: April 2020 (lockdown period March 25 - April 25)

Education & Training Programmes

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- Conducted: nil

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Progress Report: Vinod Sonthwal

Period: April 2020 (lockdown period March 25 - April 25)

1.1 ME Construction Technology and Management

1. Foundation Design and Construction

- i) Provided instrumental material to the students
- ii) Provided related videos link
- iii) Assignments are given to the students
- iv) Evaluated the assignments and provided the necessary feedback to the students

2. Soil Engineering Laboratory

- i) Students are asked to watch the videos developed by me related to geotechnical engineering and available on NCTEL.
- ii) Asked the students to prepare the observation sheet of each experiment.

3. Final Thesis and Pre Thesis

Guidance to students for preparation of Pre thesis and Final Thesis

4. Paper Presentation

Preparation of paper for submission under progress

5. Training

Attended online training on Cisco Webex on April 20, 2020, from 4 pm onwards

Attended a (webinar) Short Course on Numerical Solutions to Geotechnical Challenges with midas GTS NX from 1-12 June,2020. (Er. VKS)

Progress Report: Dr. Amit Goyal

Period: April 2020 (lockdown period March 25 - April 25)

- **Teaching M.E** regular students through recorded lecture contents on **Earthquake Resistant Masonry Structures**.
- **Developed E-content** in the PPT format by guiding M.E students on the various topics of **Advanced Construction Technologies**.
- **Prepared Assignments for M.E** regular students. E-books on the topic **Tall Buildings and Construction building** materials have been provided to students for the preparation of their examination.
- **Guiding M.E students in their thesis** work and successfully designed and developed one affordable Styrene Butadiene rubber friction damper for framed structures. It is my immense pleasure to inform our worthy Director that our developed technology worked beyond our expectations and we have achieved a great success. we have also developed one more technology for the improvement of out of plan behaviour of masonry walls under seismic loading by using waste material, Specimens have been developed.
- **Checked pre-thesis** work of M.E students.
- **Guiding Two Ph.D** students in their research work.
- **Reviewed research paper No. SCENG-795**, entitled "Compressive and flexural behavior of RC columns externally wrapped with FRP including buckling effects of longitudinal bars." of ASCE Journal, Practice Periodical on Structural Design and Construction.
- **Attended online training** on Cisco Webex on April 20,2020 from 4pm onwards
- **Prepared one research paper** on interlinked block masonry system and about to submit in one of the journal of International repute.
- **Prepared one reader** on Rural Construction Technology for M.E students by recollecting my old literature work.

Progress Report: Himmi gupta

Period: During the lockdown period I have been working from home from 23 March 2020 onwards as per office orders. Following are the details of work done till date:

1. ME (Construction Technology and Management) classes

MCT 6204: Green Buildings and Services

- Course Faculty (Conducting the course completely)
- Preparing lectures
- Conducting lectures using Zoom App
- Creating and maintaining Google Classroom for the course (all announcements, sharing material, assignments-assigning and submission, evaluation)
- Giving assignments
- Assignments Evaluation, discussions
- Follow up with each student. Personally contacting and motivating the students located in remote areas to attend classes. All students are regularly attending the course.

2. One week Online STC "Green and Intelligent Buildings" conducted from 14-18 April 2020. (Oplan No ICTO-10)

- Course Coordinator
- (Faculty work and clerical work)
- 118 participants: Teachers of Polytechnics and Engineering Colleges from all over India
- Registration queries through calls and emails
- Scheduling the one-week classes
- Developing content
- Compiling additional reading material and website links
- Creating and maintaining Google Classroom for the course (all announcements, sharing material, quiz-assigning and submission, evaluation)
- Regular daily correspondence with participants about their attendance, quiz and other queries and guiding them about using Google Classroom and Zoom App for sessions
- Editing participants profile as requested by them due to their wrong entries.
- Handling the NITTTR STC Portal for registration, attendance, marking, certificate issuing.
- Post-course queries by participants.

3. Instructional Material

- Developing a reader on Artificial Intelligence in Civil Engineering as per Training Calendar 2020-21 of the institute.

4. SWAYAM COURSE-VIDEOS

- 20-hours course on Green and Intelligent Buildings.
- The course details viz topics, video titles, supporting reading material, their times have been finalized.
- Working on video content

