



# **DADI INSTITUTE OF ENGINEERING & TECHNOLOGY**

(Approved by A.I.C.T.E., New Delhi & Affiliated to JNTUK, Kakinada)

**A NAAC Accredited Institute**

An ISO 9001:2008; ISO 14001:2004 & OHSAS 18001:2007 Certified Institution  
NH-5, Anakapalle – 531002, Visakhapatnam, A.P.

Mobile: +91 9963981111, Website: [www.diet.edu.in](http://www.diet.edu.in), E-mail: [info@diet.edu.in](mailto:info@diet.edu.in)

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## **CIRCULAR**

Anakapalle

Dt: 18-1-2020

Department of Civil Engineering is hereby informed that, in view of the feedback received from II & III B.Tech. Civil students regarding skill enhancement and to improve the expertise of students Repair and Rehabilitation of Structures, HOD is advised to depute a faculty from CIVIL to design and develop a suitable course structure in line with basic concepts of Python Programming for working on real time applications to II B.Tech. ECE students with over 30 working hours. Please ensure that this Add-on course helps them to understand the basic data operations in Python Programming & to develop real time projects using Python Programming. Make arrangements to deliver the course from next week onwards.

**PRINCIPAL**

# Dadi Institute of Engineering & Technology



Approved by AICTE & Permanently Affiliated to JNTUK  
NAAC Accredited Institute & Inclusion under Section 2(f) & 12(B) of the UGC Act  
NH-16, Anakapalle, Visakhapatnam, Andhra Pradesh  
9963694444, 9963981111, [www.diet.edu.in](http://www.diet.edu.in), [info@diet.edu.in](mailto:info@diet.edu.in)

## Department of CIVIL Engineering

A

Five Week Training Program  
on

**“Repair and Rehabilitation of  
Structures”**

Course Duration  
(27/1/21 to 28/2/21)  
Twice a Week

**Course Instructor**

**Mr M RVSG Guptha**

Assistant Professor,  
Department of CIVIL

**Venue:**

Lecture Hall 24, 3rd Floor, DIET



## About the Institute

Dadi Institute of Engineering & Technology is a top ranked Engineering and Management College affiliated to Jawaharlal Nehru Technological University, Kakinada. The Institute is NAAC Accredited, ISO Certified and also associated with many professional bodies in the field of Engineering, Technology and Management. It strives to promote the highest standards among the students and enable them to Build a New World. Dadi Institute of Engineering & Technology is distinctive among institutions of higher learning. Founded in 2006 by Sri Dadi Veerabhadra Rao, an academician and former Minister as the first multicultural and co- educational college in Anakapalle which admits only academically promising students.

## About CIVIL Department

The Department of Civil Engineering was established in the year 2011, with an annual intake of 60 students for B.Tech. Programme. Department also offers Diploma in Civil Engineering with an intake of 60 seats, which was established in the year 2013. The Civil Department is well equipped with spacious laboratories and experienced technicians. The department of Civil Engineering also offers various consultancy works. Apart from academic, the students get indulged in laboratory experiments with various consultancy works under the Civil Engineering Technology Association (CETA) Club Activities.

## About the course

Students will be able to learn about Familiarize Students with deterioration of concrete in structures Understand procedure to carryout Physical evaluation of buildings and prepare report Understand failures and causes for failures in structures Equip student with concepts of NDT and evaluation. At the end of this course the student will be able to a. Explain deterioration of concrete in structures.



# Department of Civil Engineering

## REPAIRS & REHABILITATION OF STRUCTURES

**Course Instructor:**

Mr. M R V S Gupta,

Assistant Professor,  
Department of CIVIL

**Duration:**

6 Weeks: (27/1/21 to 28/2/21) — Twice a Week

Repair and Rehabilitation of Structures: Maintenance and Repairs Strategies. Maintenance Engineering is defined as the work done to keep the civil Engineering structures and work in conditions so as to enable them to carry out the functions for which they are constructed. It is preventive in nature.

### Course Learning Objectives:

**The objective of this course is:**

1. Familiarize Students with deterioration of concrete in structures
2. Equip student with concepts of NDT and evaluation
3. Understand failures and causes for failures in structures
4. Familiarize different materials and techniques for repairs
5. Understand procedure to carryout Physical evaluation of buildings and prepare report.



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- Course Outcomes:** At the end of this course the student will be able to
- Explain deterioration of concrete in structures
  - Carryout analysis using NDT and evaluate structures
  - Assess failures and causes of failures in structures
  - Carryout Physical evaluation and submit report on condition of the structure.

## **Syllabus**

**Module - I Deterioration of concrete in structures:** Physical processes of deterioration like Freezing and Thawing, Wetting and Drying, Abrasion, Erosion, Pitting, Chemical processes like Carbonation, Chloride ingress, Corrosion, Alkali aggregate reaction, Sulphate attack Acid attack, temperature and their causes, Mechanism, Effect, preventive measures. - Cracks:Cracks in concrete, type, pattern, quantification, measurement & preventive measures.

**Module- II Non Destructive Testing-** Non destructive test methods for concrete including Rebound hammer, Ultrasonic pulse velocity, Rebar



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locator, Corrosion meter, Penetration resistance and Pull out test, Core cutting  
Corrosion: Methods for corrosion measurement and assessment including half-cell potential and resistivity, Mapping of data. Civil Engineering 217

**Module-III Failure of buildings:** Definition of building failure-types of failures- Causes of Failures- Faulty Design, Accidental over Loading, Poor quality of material and Poor Construction practices- Fire damage - Methodology for investigation of failures-diagnostic testing methods and equipments-repair of cracks in concrete .

**Module: IV Repair Techniques:** Grouting, Jacketing, Shotcreting, externally bonded plates, Nailing, Underpinning and under water repair; Materials, Equipments, Precautions and Processes.

**Module: V Investigation of structures:** Distress, observation and preliminary test methods. Case studies: related to rehabilitation of bridge piers, dams, canals, heritage structures, corrosion and erosion damaged structures.













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## COURSE COMPLETION CERTIFICATE

This Certificate is given to

**KAILLA ANJALI**

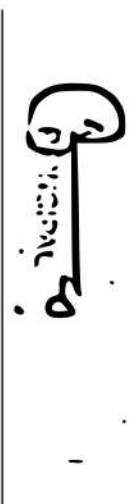


For the successful completion of 5 week course on Repairs and Rehabilitation of Structures from 27/01/2021 – 28/02/2021



Mr.MRVSG Guptha

Course Instructor



Dr. Ch Narasimham

Principal



Mr. Dadi Ratnakar

Chairman





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This Certificate is given to

**LAILAM DORA BABU**

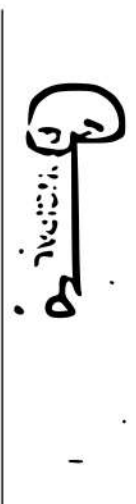


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## COURSE COMPLETION CERTIFICATE

This Certificate is given to

**PAILLA VINITHADEVI**

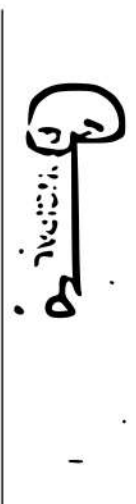


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# SEERA BALAJI RAJU

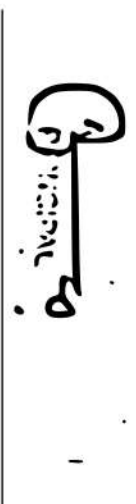


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# VEGI BHARGAV

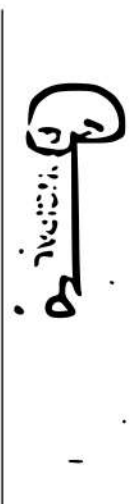


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## STUDENT FEEDBACK FORM

Dear Candidate,

Your feedback is critical for the Institute to ensure that we are meeting your educational needs. We would appreciate if you could take a few minutes to share your opinions with us so that we can serve you better.

Title of the Activity: Repairs and rehabilitation of structures

Date/Duration: 27/1/21 - 28/2/21 Instructor/Coordinator: MRVSN Gupta

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. The content was as described in Publicity Material                                       | 1 | 2 | 3 | ④ | 5 |
| 2. The program was helpful in practical understanding                                       | 1 | 2 | 3 | ④ | 5 |
| 3. I will recommend this course/workshop program to relevant conservators across our campus | 1 | 2 | 3 | ④ | 5 |
| 4. The program was well placed within allotted time   | 1 | 2 | 3 | ④ | 5 |
| 5. The instructor was an effective communicator   | 1 | 2 | 3 | ④ | 5 |

Feedback/Suggestions  
learned lot  
of thing especial  
ly mainly  
how to rebuild  
the structures

Please return this form to the Course Instructor/Organizer/Coordinator at the end of the workshop/add-on course/Training Program



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Date/Duration: (27/1/20 - 28/2/21) SW Instructor/Coordinator: MRVSG Gupta

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. The content was as described in Publicity Material                                       | 1 | 2 | 3 | ④ | 5 |
| 2. The program was helpful in practical understanding                                       | 1 | 2 | ③ | 4 | 5 |
| 3. I will recommend this course/workshop program to relevant conservators across our campus | 1 | 2 | 3 | ④ | 5 |
| 4. The program was well placed within allotted time   | 1 | 2 | 3 | ④ | 5 |
| 5. The instructor was an effective communicator   | 1 | 2 | ③ | 4 | 5 |

Feedback/Suggestions  
We learned  
Many Newthings  
in these session  
on Construction  
and Repairs

Please return this form to the Course Instructor/Organizer/Coordinator at the end of the workshop/add-on course/Training Program