



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Ref: BIHER/BIST/Civil//Spl/2018

Date: 23/07/2018

From
Mr.T.P.Meikandaan,
Department of Civil Engineering,
BIHER

To
The HOD
Department of Civil Engineering,
BIHER

Respected Sir

Sub – Permission to conduct value added course – reg.

I wish to inform you that, as it is decided to conduct the value added courses to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes. The eligibility of this course is open for UG students from department of civil engineering. So please permit us to conduct the value added course on Maintenance and Rehabilitation of Structures which is starting from 06/08/2018 to 06/09/2018.

Thanking you.

Head of HOD department
Department of Civil Engineering
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)
Selaiyur, Chennai-600 073. INDIA



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BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

No.173, Agharam Road, Selaiyur, Chennai , T.N - 600 073.

Ref: BIHER/BIST/Civil//Spl/2018

Date: 25/07/2018

CIRCULAR

Many a times, the defined skill sets that are being imparted to students today with Programme Specific Objectives in educational institutions become redundant sooner than later due to rapid technological advancements. It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Hence a Value Added Course is offered by Department of School of Civil and Infrastructure Engineering, Bharath Institute of Higher Education & Research. The course offered is **Maintenance and Rehabilitation of Structures** with the duration of 30 hours (Two hour per day) and commences from **06/08/2018 to 06/09/2018**.

Eligibility: Course is open for UG Students for Department School of Civil and Infrastructure Engineering.

Registration:

The registration form which is available in the university website should be duly filled by the participants and to be submitted to the Coordinator at least 5 days before the commencement of course.

Contact:

Dr.T.P.Meikandaan

Associate Professor / School of Civil and Infrastructure Engineering.,

Course Coordinator

Bharath Institute of Higher Education & Research.

Email id: meikandaan.civil@bharathuniv.ac.in

HOD
Head of the Department
Department of Civil Engineering
Bharath Institute of Higher Education & Research
(Declared as Deemed to be University U/S 3 of
Selaiyur, Chennai - 600 073)

SCHOOL OF CIVIL & INFRASTRUCTURE ENGINEERING
VALUE ADDED COURSE – MAINTENANCE AND REHABILITATION OF
STRUCTURES
STUDENTS NAME LIST

| Sl.NO | Reg No | Name of the students | E-Mail ID |
|-------|----------|--------------------------------|--|
| 1 | U16CE001 | ATHNAN BAYAJ K | bayaj1998@gmail.com |
| 2 | U16CE002 | KAYALA MAHESWARA REDDY . | maheswarareddy278@gmail.com |
| 3 | U16CE003 | RAHUL P | Rahulross98@gmail.com |
| 4 | U16CE004 | SAJEEVA RAO C H | sajeev2306@gmail.com |
| 5 | U16CE005 | TOURANGBAM LIZEN SINGH . | Lizen47tourangbam@gmail.com |
| 6 | U16CE006 | R.ARAVINTH | arunaravinth.1999@gmail.com |
| 7 | U16CE007 | BALAJI A | Balabalaji7711@gmail.com |
| 8 | U16CE008 | AJAY M | ajay2871999@gmail.com |
| 9 | U16CE009 | ABHISHEK SINGH KSH . | abhishekksh3@gmail.com |
| 10 | U16CE010 | JOYBIGANDA SINGH LAIRIKYENGBAM | joybigandal@gmail.com |
| 11 | U16CE012 | RAJKUMAR SOMOKANTA SINGH . | somoraj.rk@gmail.com |
| 12 | U16CE013 | KANGKIRAM TACHING | kangkiram.5@gmail.com |
| 13 | U16CE014 | JAYOBRATO PAL | jayobrato98pal@gmail.com |
| 14 | U16CE015 | NILKEE MUKHIM | neilkeermukhim.@gmail.com |
| 15 | U16CE016 | SRIRAM J | sriram27121997@gmail.com |
| 16 | U16CE017 | YERRA BALAJI BHANUDAYA . | Balajibhanu225143@gmail.com |
| 17 | U16CE018 | SAMALA AKHIL | Samalaakhil9797@gmail.com |
| 18 | U16CE019 | BOSE NAVEEN KUMAR . | naveenkumarveeran30@gmail.com |
| 19 | U16CE020 | ARUN SABHARISH C A | aruncrazy8058@gmail.com |
| 20 | U16CE021 | SRIGADE PAVAN PRASAD . | Srigadepavan@gmail.com |
| 21 | U16CE024 | MD SHAMIM AZAM | azamshamim360@gmail.com |
| 22 | U16CE025 | KAMALDOSS K Y | kamaldoss82@gmail.com |

| | | | |
|----|----------|----------------------------------|--|
| 23 | U16CE029 | MARABATHUNI SREENU | marabathunisreenu@gmail.com |
| 24 | U16CE030 | KAREMPUDI AJAYKUMAR | ajaykumar.karempudi@gmail.com |
| 25 | U16CE031 | POLINENI ANUSH BABU . | anesh.chowdary.5@gmail.com |
| 26 | U16CE032 | GANJI AVINASH | Avinash.ganji25@gmail.com |
| 27 | U16CE033 | VIGNESH V | vignesh1996@gnai.com |
| 28 | U16CE034 | PURNAJEET USHAM | Zitpurnajeetusham@gmail.com |
| 29 | U16CE035 | NGANGOM SRIKANTA SINGH . | ngangom26@gmail.com |
| 30 | U16CE036 | TAGGUPARTI RAJASEKHAR REDDY . | reddyrajasekhar016@gmail.com |
| 31 | U16CE039 | KECHANGULIE KEDITSU | Kechakeditsu44@gmail.com |
| 32 | U16CE040 | BISHWANATH SINGH | bishwa155@gmail.com |
| 33 | U16CE041 | RITESH KUMAR . | kratesh867@gmail.com |
| 34 | U16CE042 | RENISH R | renishjo.re@gmail.com |
| 35 | U16CE043 | PARAS WARIBAM | pwaribam@gmail.com |



Head of the Department
Department of Civil Engineering
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Selaiyur, Chennai-600 073. INDIA

Value Added Course

Maintenance and Rehabilitation of Structures

Content of Syllabus

| S.No. | Syllabus Details | No. of Lecture hrs | Time | Date | Lecturer name |
|-------|--|--------------------|----------------|------------|-------------------|
| 1 | Distresses monitoring, Causes of distresses, Quality assurance. | 2 | 3.00 – 5.00 pm | 06/08/2018 | Dr.T.P.Meikandaan |
| 2 | Defects due to climate, chemicals, wear and erosion, Inspection. | 2 | 3.00 – 5.00 pm | 08/08/2018 | Dr.T.P.Meikandaan |
| 3 | Structural appraisal, Economic appraisal. | 2 | 3.00 – 5.00 pm | 10/08/2018 | Dr.T.P.Meikandaan |
| 4 | Causes, diagnosis, remedial measures, Thermal and Shrinkage cracks | 2 | 3.00 – 5.00 pm | 13/08/2018 | Dr.T.P.Meikandaan |
| 5 | unequal loading, Vegetation and trees, Chemical action | 2 | 3.00 – 5.00 pm | 17/08/2018 | Dr.T.P.Meikandaan |
| 6 | Foundation movements, Techniques for repair, Epoxy injection. | 2 | 3.00 – 5.00 pm | 20/08/2018 | Dr.T.P.Meikandaan |
| 7 | Sources of dampness, Moisture movement from ground. | 2 | 3.00 – 5.00 pm | 22/08/2018 | Dr.T.P.Meikandaan |
| 8 | Reasons for ineffective DPC, Roof leakage, Pitched roofs, Madras Terrace roofs Leakage of Concrete slabs Dampness in solid walls, condensation, hygroscopic salts, remedial treatments | 2 | 3.00 – 5.00 pm | 24/08/2018 | Dr.T.P.Meikandaan |
| 9 | Ferro cement overlay, Chemical coatings, Flexible and rigid coatings. | 2 | 3.00 – 5.00 pm | 27/08/2018 | Dr.T.P.Meikandaan |
| 10 | Concrete Structures: Introduction, Causes of deterioration. | 2 | 3.00 – 5.00 pm | 28/08/2018 | Dr.T.P.Meikandaan |
| 11 | Diagnosis of causes, Flow charts for diagnosis. | 2 | 3.00 – 5.00 pm | 30/08/2018 | Dr.T.P.Meikandaan |

| | | | | | |
|----|---|---|----------------|------------|-------------------|
| 12 | methods of repair, repairing, spalling and disintegration. | 2 | 3.00 – 5.00 pm | 31/08/2018 | Dr.T.P.Meikandaan |
| 13 | Steel Structures : Types and causes for deterioration, preventive measures. | 2 | 3.00 – 5.00 pm | 03/09/2018 | Dr.T.P.Meikandaan |
| 14 | Repair procedure, Brittle fracture. | 2 | 3.00 – 5.00 pm | 04/09/2018 | Dr.T.P.Meikandaan |
| 15 | Design for rehabilitation. | 2 | 3.00 – 5.00 pm | 06/09/2018 | Dr.T.P.Meikandaan |



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Topic: Maintenance and Rehabilitation of Structures

Type of Course: value added course/ UG

School of Civil and infrastructure Engineering

Pre-Requisites: Concrete Technology

Course Duration: 30 hours (06 August 2018 to 06 September 2018)

Intended Audience: School of Civil and infrastructure Engineering Students

Industries Applicable To: All companies that deal with the Civil Engineering development

Coordinator: Dr.T.P.Meikandaan

Objective:

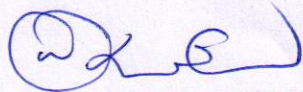
- a) To study the damages, repair and rehabilitation of structures.
- b) To learn about general consideration in quality assurance, structural appraisal etc.
- c) To know about techniques for repair in building cracks.
- d) To understand the reason for ineffective DPC and remedial treatments.
- e) To know about types, causes for deterioration and preventive measures.
- f) To learn the concepts of strengthening of existing structures.

VALUE ADDED COURSE

MAINTENANCE AND REHABILITATION OF STRUCTURES

COURSE OUTLINE:

This course will help students learn how to identify various deterioration mechanisms or damage mechanisms in concrete structures (say, deterioration of metallic reinforcement and cementitious materials). The course will discuss both the scientific aspects and its use while practicing repair works at site. Use of various non-destructive, partially-destructive tools to assess the condition of the structure will be discussed. Also, tips on selecting measurable parameters that are useful in deciding the further repair and maintenance practices will be provided. Following this, practices for typical near-surface repair, corrosion protection, structural strengthening, structural stabilization, etc. will be discussed in detail. At the end of the course students will be able to suggest evaluation and repair/retrofitting methods for extending the service life of concrete structures. Importance for preventive maintenance practices. Maintenance is preventive in nature. Activities include inspection and works, necessary to fulfill the intended function, or to sustain original standard of service.


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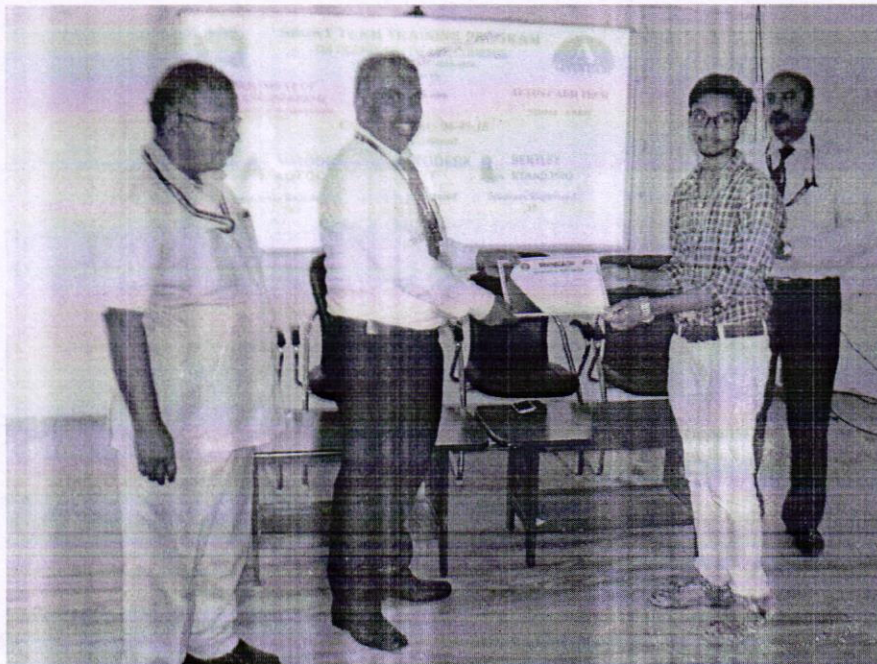
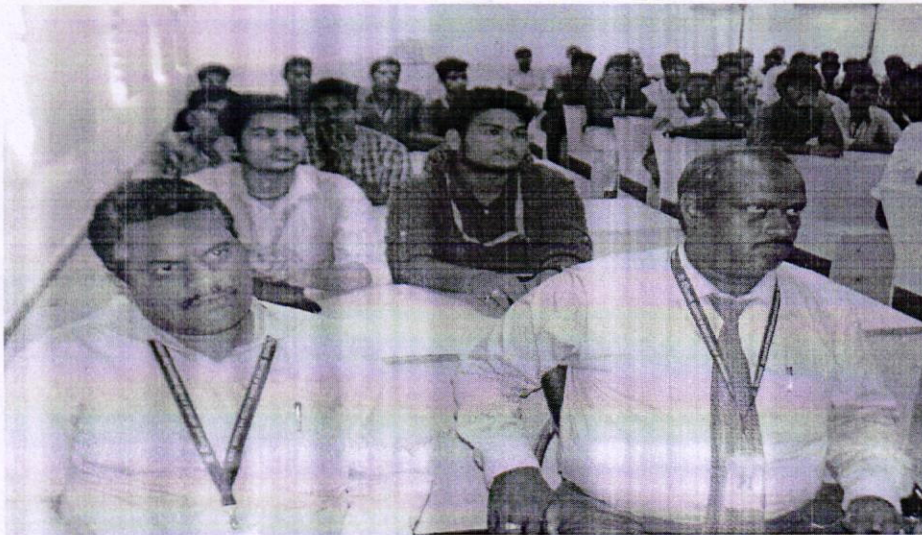
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SCHOOL OF CIVIL & INFRASTRUCTURE ENGINEERING

VALUE ADDED COURSE – MAINTENANCE AND REHABILITATION OF STRUCTURES

Date: 06.08.2018

Year/Sem: III /V



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NAAC
NATIONAL ASSESSMENT AND
ACCREDITATION COUNCIL

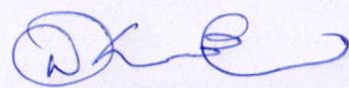


BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY

CERTIFICATE OF PARTICIPATION

This is to Certify that BALAJI A, from Bharath Institute of Higher Education and Research, has participated in value added course on **‘Maintenance and Rehabilitation of Structures’** presented by **Dr.T.P.MEIKANDAAN, Associate Professor**, Organized by School of Civil & Infrastructre Engineering, Bharath Institute of Science & Technology, BIHER from 06.08.2018 To 06.09.2018.


Coordinator


HOD
Head of the Department
Department of Civil Engineering
Bharath Institute of Higher Education & Research
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Selaiyur, Chennai-600 073, INDIA

On-line Feedback

Value added course on Maintenance and Rehabilitation of Structures

| Sl.NO | Email Address | Name | Reg number | Institute | Designation | Phone Number | Rating for the session (1 to 5) | Feedback * |
|-------|-----------------------------|--------------------------------|------------|--|-------------|--------------|---------------------------------|--|
| 1 | bayaj1998@gmail.com | ATHNAN BAYAJ K | U16CE001 | Bharath Institute of higher education and research | Student | 7904684263 | 5 | It's great to learn new staffs. thank you |
| 2 | maheswarareddy278@gmail.com | KAYALA MAHESWARA REDDY . | U16CE002 | Bharath Institute of higher education and research | Student | 9514461188 | 5 | Good |
| 3 | Rahulross98@gmail.com | RAHUL P | U16CE003 | Bharath Institute of higher education and research | Student | 7397262652 | 4 | Very good |
| 4 | sajeev2306@gmail.com | SAJEEVA RAO C H | U16CE004 | Bharath Institute of higher education and research | Student | 8682868015 | 5 | nice presentation almost covered all topics related to this subject, thank you sir |
| 5 | Lizen47fourangbam@gmail.com | TOURANGBAM LIZEN SINGH . | U16CE005 | Bharath Institute of higher education and research | Student | 7550105911 | 3 | The software that is available in a variety |
| 6 | arunaravinth.1999@gmail.com | R.ARAVINTH | U16CE006 | Bharath Institute of higher education and research | Student | 8778136368 | 4 | Good session |
| 7 | Balabalaji7711@gmail.com | BALAJI A | U16CE007 | Bharath Institute of higher education and research | Student | 8610892435 | 4 | good |
| 8 | ajay2871999@gmail.com | AJAY M | U16CE008 | Bharath Institute of higher education and research | Student | 7395967727 | 5 | Very informative video |
| 9 | abhishekksh3@gmail.com | ABHISHEK SINGH KSH . | U16CE009 | Bharath Institute of higher education and research | Student | 9650415523 | 5 | It was well efficient to know in detail. |
| 10 | joybigandal@gmail.com | JOYBIGANDA SINGH LAIRIKYENGBAM | U16CE010 | Bharath Institute of higher education and research | Student | 8415878808 | 4 | The session was very good |
| 11 | somoraj.rk@gmail.com | RAJKUMAR SOMOKANTA SINGH . | U16CE012 | Bharath Institute of higher education and research | Student | 9884583220 | 4 | Good |
| 12 | kangkiram.5@gmail.com | KANGKIRAM TACHING | U16CE013 | Bharath Institute of higher education and research | Student | 8837422310 | 4 | Nice |
| 13 | jayobrato98pal@gmail.com | JAYOBRATO PAL | U16CE014 | Bharath Institute of higher education and research | Student | 9832115770 | 1 | Very good |
| 14 | neilkeermukhim.@gmail.com | NILKEE MUKHIM | U16CE015 | Bharath Institute of higher education and research | Student | 8787643316 | 4 | Good |
| 15 | sriram27121997@gmail.com | SRIRAM J | U16CE016 | Bharath Institute of higher education and research | Student | 9790833563 | 5 | Excellent |

On-line Feedback

Value added course on Maintenance and Rehabilitation of Structures

| Sl.NO | Email Address | Name | Reg number | Institute | Designation | Phone Number | Rating for the session (1 to 5) | Feedback * |
|-------|-------------------------------|-------------------------------|------------|--|-------------|--------------|---------------------------------|---|
| 16 | Balajibhanu225143@gmail.com | YERRA BALAJI BHANUDAYA . | U16CE017 | Bharath Institute of higher education and research | Student | 8008246159 | 4 | Well organised session |
| 17 | Samalaakhil9797@gmail.com | SAMALA AKHIL | U16CE018 | Bharath Institute of higher education and research | Student | 9573265145 | 1 | The session was pretty good, and I've gotta listened clearly, It was incredible |
| 18 | naveenkumarveeran30@gmail.com | BOSE NAVEEN KUMAR . | U16CE019 | Bharath Institute of higher education and research | Student | 7358037450 | 4 | Very good |
| 19 | aruncrazy8058@gmail.com | ARUN SABHARISH C A | U16CE020 | Bharath Institute of higher education and research | Student | 9600118859 | 5 | Excellent webinar that i have never seen. |
| 20 | Srigadepavan@gmail.com | SRIGADE PAVAN PRASAD . | U16CE021 | Bharath Institute of higher education and research | Student | 9666202032 | 3 | Good explanation |
| 21 | azamshamim360@gmail.com | MD SHAMIM AZAM | U16CE024 | Bharath Institute of higher education and research | Student | 7759068308 | 5 | good |
| 22 | kamaldoss82@gmail.com | KAMALDOSS K Y | U16CE025 | Bharath Institute of higher education and research | Student | 9840184553 | 5 | good |
| 23 | marabathunisreenu@gmail.com | MARABATHUNI SREENU | U16CE029 | Bharath Institute of higher education and research | Student | 8074309554 | 5 | Very much informative session. |
| 24 | ajaykumar.karempudi@gmail.com | KAREMPUDI AJAYKUMAR | U16CE030 | Bharath Institute of higher education and research | Student | 7036684266 | 5 | Good |
| 25 | anesh.chowdary.5@gmail.com | POLINENI ANUSH BABU . | U16CE031 | Bharath Institute of higher education and research | Student | 8072908123 | 3 | Over all session was use full nd filled with contents |
| 26 | Avinash.ganji25@gmail.com | GANJI AVINASH | U16CE032 | Bharath Institute of higher education and research | Student | 9160096408 | 5 | Good |
| 27 | vignesh1996@gnai.com | VIGNESH V | U16CE033 | Bharath Institute of higher education and research | Student | 9940230346 | 5 | Good |
| 28 | Ziturnajeetusham@gmail.com | PURNAJEET USHAM | U16CE034 | Bharath Institute of higher education and research | Student | 9366887653 | 4 | It was very helpful |
| 29 | ngangom26@gmail.com | NGANGOM SRIKANTA SINGH . | U16CE035 | Bharath Institute of higher education and research | Student | 7085924922 | 4 | Good |
| 30 | reddyrajasekhar016@gmail.com | TAGGUPARTI RAJASEKHAR REDDY . | U16CE036 | Bharath Institute of higher education and research | Student | 9010579593 | 5 | Good |

On-line Feedback

Value added course on Maintenance and Rehabilitation of Structures

| Sl.NO | Email Address | Name | Reg number | Institute | Designation | Phone Number | Rating for the session (1 to 5) | Feedback * |
|-------|--------------------------|---------------------|------------|--|-------------|--------------|---------------------------------|-----------------------------|
| 31 | Kechakeditsu44@gmail.com | KECHANGULIE KEDITSU | U16CE039 | Bharath Institute of higher education and research | Student | 8731008619 | 4 | Good |
| 32 | bishwa155@gmail.com | BISHWANATH SINGH | U16CE040 | Bharath Institute of higher education and research | Student | 8939667178 | 5 | Very informative and useful |
| 33 | krritesh867@gmail.com | RITESH KUMAR . | U16CE041 | Bharath Institute of higher education and research | Student | 7358261245 | 5 | Good |
| 34 | renishjo.re@gmail.com | RENISH R | U16CE042 | Bharath Institute of higher education and research | Student | 9585206792 | 4 | Good |
| 35 | pwaribam@gmail.com | PARAS WARIBAM | U16CE043 | Bharath Institute of higher education and research | Student | 8794541589 | 3 | Good |



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