

# Sharath ISTITUTE 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:22/03/2018

#### **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 Civil Engineering, Bharath Institute of Higher Education & Research. The course offered is **Environmental Management and Sustainable Development** with the duration of 30hours (one hour per day) and commences from **02/04/2018**.

Eligibility: Course is open for UG Students of Department of Civil 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 10 days before the commencement of course.

#### Contact:

Mrs.L.Maria Subashini

Associate Professor / Department of Civil Engineering,

Course Coordinator

Bharath Institute of Higher Education & Research.

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

HOD/CIVIL

Bharath Institute of Higher Education & Resourch (Declared as Deemed to be University U/S 3 of UGC Act, 1956) Selalyur, Chennai-600 073. INDIA

# Content of Syllabus

| S.No | Syllabus Details  | No. of<br>Lecture<br>hrs | Time                       | Date       | Lecture<br>name      |
|------|---|--------------------------|----------------------------|------------|----------------------|
| 1    | Introduction  | 1 hrs                    | 10.00 am<br>to 11.00<br>pm |            | L.Maria<br>Subashini |
| 2    | Principles of Environmental<br>Management               | 1 hrs                    | 11.00 am<br>to 12.00<br>pm | 2.4.2018   | L.Maria<br>Subashini |
| 3    | Policy and Legal Aspects of EM                          | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | 5.4.2018   | L.Maria<br>Subashini |
| 4    | Environmental Impact<br>Assessment (EIA)                | 1 hrs                    | 11.00 am<br>to 12.00<br>pm |            | L.Maria<br>Subashini |
| 5    | EIA Documentation and Processes                         | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | - 6.4.2018 | L.Maria<br>Subashini |
| 6    | Environmental Auditing                                  | 1 hrs                    | 11.00 am<br>to 12.00<br>pm |            | L.Maria<br>Subashini |
| 7    | Life Cycle Assessment (LCA)                             | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | 7.4.2010   | L.Maria<br>Subashini |
| 8    | Environmental Management<br>System Standards            | 1 hrs                    | 11.00 am<br>to 12.00<br>pm | 7.4.2018   | L.Maria<br>Subashini |
| 9    | Environmental Management<br>Techniques                  | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | 8.4.2018   | L.Maria<br>Subashini |
| 10   | Environmental Design                                    | 1 hrs                    | 11.00 am<br>to 12.00<br>pm |            | L.Maria<br>Subashini |
| 11   | Environmental Economics                                 | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | 0.4.2019   | L.Maria<br>Subashini |
| 12   | Sustainability Concepts –<br>Innovations and Challenges | 1 hrs                    | 11.00 am<br>to 12.00<br>pm | 9.4.2018   | L.Maria<br>Subashini |
| 13   | Ecology, Population & Environmental Chemistry           | 1 hrs                    | 10.00 am<br>to 11.00<br>pm | 12.4.201   | L.Maria<br>Subashini |

| 14 | Physical Process in Environment                                   | 1 hrs | 11.00 am<br>to 12.00       |          | L.Maria<br>Subashini |
|----|---|-------|----------------------------|----------|----------------------|
| 15 | Environmental Biological<br>Concepts                              | 1 hrs | 10.00 am<br>to 11.00       | 13.4.201 | L.Maria<br>Subashini |
| 16 | Environmental Risk<br>Assessments with Concepts of<br>EIA and LCA | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 17 | Water – Quantity and Quality                                      | 1 hrs | 10.00 am<br>to 11.00<br>pm | 14.4.201 | Dr.B.Saritha         |
| 18 | Water Treatment Basics  | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 19 | Basics of Wastewater Collection,<br>Treatment & Resource Recovery | 1 hrs | 10.00 am<br>to 11.00<br>pm | 15.4.201 | Dr.B.Saritha         |
| 20 | Basics of Solid Waste, Soil and<br>Noise Pollution                | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 21 | Basics of Air Pollution Issues –<br>Global and Local              | 1 hrs | 10.00 am<br>to 11.00<br>pm | 16.4.201 | Dr.B.Saritha         |
| 22 | Case Studies  | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 23 | Climate change adaptation & green and blue infrastructure         | 1 hrs | 10.00 am<br>to 11.00<br>pm | 19.4.201 | Dr.B.Saritha         |
| 24 | Drivers of change & systems thinking                              | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 25 | Sustainable living & principles of ecological design              | 1 hrs | 10.00 am<br>to 11.00<br>pm | 20.4.201 | Dr.B.Saritha         |
| 26 | Climate change mitigation & the low-carbon economy                | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 27 | Citizen engagement & creativity in rethinking the future          | 1 hrs | 10.00 am<br>to 11.00<br>pm | 21.4.201 | Dr.B.Saritha         |
| 28 | Sustainability & civilisation                                     | 1 hrs | 11.00 am<br>to 12.00<br>pm | 8        | Dr.B.Saritha         |
| 29 | Navigating towards  | 1 hrs | 10.00 am                   | 22.4.201 | Dr.B.Saritha         |

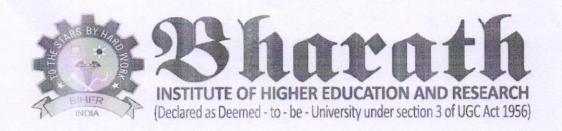
|    | sustainability                    |       | to 11.00 pm          | 8 |              |
|----|-----------------------------------|-------|----------------------|---|--------------|
| 30 | Global challenges & urban futures | 1 hrs | 11.00 am<br>to 12.00 |   | Dr.B.Saritha |
|    |                                   |       | pm                   |   |              |



Department of Civil Eng.

Bhorath Institute of Higher Education

(Declared as Deemed to be University U/S 3 of U60 // Selalyur, Chennai-600 073. INDIA



Topic: Environmental Management and Sustainable Development

Type of Course: Value added course / UG

Department of school of Civil and infrastructure Engineering

Pre-Requisites: Environmental Science

Course Duration: 30 hours (2 April' 18)

Intended Audience: Civil Engineering Students

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

Coordinators: L.Maria Subashini & Dr. B. Saritha

#### Objective:

- a) To impart an understanding of systems approach to Environmental Management and skills for environmental performance in terms of legal compliance, pollution prevention and continual improvement.
- b) To understand the environmental, social and economic dimensions of sustainability and the principles evolved through landmark events so as to develop an action mindset for sustainable development.
- c) To understand the importance of natural resources and strategies for its sustainable management.

Head of the Department
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#### COURSE OUTLINE:

This course introduces to the best environmental technologies for a sustainable development and how they are managed in various settings around the world. This course gives an opportunity to learn about global trends that influence our environment and the living conditions and how different management systems and approaches that are used around the world to manage the environment. This includes current environmental technologies built for the environment and technologies for sustainable soil management, groundwater protection methods and integrated Water resources management. The course will cover basic concepts of ecology, water pollution, water and wastewater quality and treatment, solid and hazardous waste management, soil and noise pollution, sustainability concepts including Environmental Impact Assessment, Life Cycle Assessment, Waste Minimization, Circular Economy and Sustainable Development Issues. Unplanned developmental activities as well as ever-increasing population have caused enormous strain on the environment resources and hence societies across the world face several problems of environmental degradation. However, it is imperative to maintain a balance between the capacity of the environment and the sustainable utilization of resources. This is only possible by understanding the environment in its totality and the principles of its scientific management. Today, 'Environment Management' (EM) is a significant term. To comprehend the term, one must understand the issues that relate to it. Development activities related to population growth can lead to environmental degradation in a number of ways, not least depletion of resources. The critical task of EM is to balance the capacity of the environment against developmental requirements effectively. This task can be achieved through application of sustainable development/utilization mechanisms which are based on scientific principles of environment.

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# BHARATH INSTITUTE OF SCIENCE AND **TECHNOLOGY**

# CERTIFICATE OF PARTICIPATION

| This is to Certify that Golla Dinesh, Bharath Institute of Higher Education and                   |
|---|
| Research, has participated in value added course on 'Environmental Management and                 |
| Sustainable Development', presented by L.Maria Subashini, Assistant Professor,                    |
| School of Civil & Infrastructure Engineering, BIHER, Organized by School of Civil &               |
| Infrastructure Engineering, Bharath Institute of Science & Technology, BIHER from 2 <sup>nd</sup> |
| April 2018 to 22 <sup>th</sup> April 2018   |

Coordinator

Co-Coordinator

HOD, Civil Engineering
Head of the Department
Department of Civil Engineering
Rhardth Institute of Higher Education & Research
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### VALUE ADDED COURSE

|                                 | Feedback Form   |    |
|---------------------------------|---|----|
| Event Name:                     | Environmental Management & Sustainable  |    |
| Event Venue: Date:              | Environmental Management & Sustainable  Department of School of Civil &  Infrastructure Engg 2/4/2018  Perivenula Charitha +0 25/41 |    |
| Name of participant:            | Perivenula Charitha Engo 9/4/2018   | 1  |
| 1. Rate the success of the even | t (1: not successful, 5 very successful)  | 18 |

2. Describe what topic is good.

Sustainability Principles

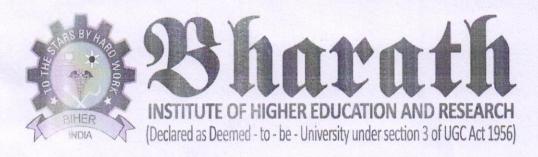
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3. What aspects of the course we improve.

4. What else would you like to see added.

(Del co)

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## SCHOOL OF CIVIL AND INFRASTRUCTURE ENGINEERING

VALUE ADDED COURSE –Environmental Management and Sustainable Development

Date: 2.04.2018 Year/Sem: II /IV



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