



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/2021

Date: 07/01/2021

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 **Short term Course on Radioecology** with the duration of 30 hours (Two hours per day) and commences from **28/03/2021 to 15/04/2021(online)**.

Eligibility: Course is open for UG Students for Department of 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:

Mrs. B. Saritha

Associate Professor

Bharath Institute of Higher Education & Research.

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


HOD

Head of the Dept.
(Civil Engineering)
Bharath Institute of Higher
Education & Research,
Selaiyur, Chennai - 600 073.

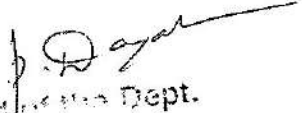
Value Added Course

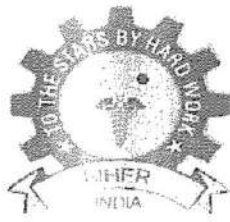
Short term Course on Radioecology

Students Name List:

| Sl.No | Reg No. | Name of the Student |
|-------|----------|----------------------------|
| 1 | U14CE060 | GAUTAM KUMAR |
| 2 | U14CE061 | GENDAN NORBU |
| 3 | U14CE062 | GOVINDHARAJ .B |
| 4 | U14CE063 | GUTHULA SUNIL KUMAR |
| 5 | U14CE064 | HAREE KRISHNAN.M |
| 6 | U14CE065 | HARISH KUMAR REDDY .G |
| 7 | U14CE066 | HEMA CHANDREN.M |
| 8 | U14CE067 | HEMANTH VENKAT SAL.B |
| 9 | U14CE068 | HOPEFULMAN BAREH |
| 10 | U14CE069 | IBANKERLANG KHARSYNTENG |
| 11 | U14CE070 | INJETI VAMSI DHAR REDDY |
| 12 | U14CE071 | IRFAN AHAMED.R |
| 13 | U14CE072 | JACQUELINE ELIZABETH .D |
| 14 | U14CE073 | JAJAM VENKATA SATISH TEJA |
| 15 | U14CE074 | JEFRIN.J |
| 16 | U14CE075 | JOBNIKOLUS SAM.J |
| 17 | U14CE076 | KADHIR SHANKAR.R |
| 18 | U14CE077 | KALTHI REDDY KISHORE REDDY |
| 19 | U14CE078 | KAMMA KOTESWARA RAO |
| 20 | U14CE079 | KANAGASUNDARI.V |
| 21 | U14CE080 | KARTHIK RAJA.P |
| 22 | U14CE081 | KARUPPAN CHETTY.N |
| 23 | U14CE082 | KASA NAGENDRA REDDY |
| 24 | U14CE083 | KASHIF SHAZADA |
| 25 | U14CE084 | KAVITA |
| 26 | U14CE085 | KIRUBANANDAN.Y |
| 27 | U14CE086 | KONDURU SURENDRA |
| 28 | U14CE087 | KRISHNAKANT ROY |
| 29 | U14CE088 | LAKSHMI KANTH.A |
| 30 | U14CE089 | LATHA.S |
| 31 | U14CE090 | LAVANYA.B |
| 32 | U14CE091 | LOGESHWARAN.S |
| 33 | U14CE092 | LOKESH .S |
| 34 | U14CE093 | LUKKEN RAKSAP |
| 35 | U14CE094 | MADHAN KUMAR.P |
| 36 | U14CE095 | MADHINANI GOPI |
| 37 | U14CE096 | MADUPALLI AKHIL |
| 38 | U14CE097 | MAHADEV BAITHA |
| 39 | U14CE098 | MANIARASU.R |
| 40 | U14CE099 | MANIRATHNAM.T |
| 41 | U14CE100 | MANIVEL RAJA |

| | | |
|----|----------|----------------------------|
| 42 | UI4CE101 | MANJOT SINGH |
| 43 | UI4CE102 | MANOHARAN.R |
| 44 | UI4CE103 | MANOJ.P |
| 45 | UI4CE104 | MANU THOMAS MUNDATTUMKUZHY |
| 46 | UI4CE105 | MARGE KOYU |
| 47 | UI4CE106 | MARPIUS AGITOK SANGMA |
| 48 | UI4CE107 | MARREDDY.HITHESWAR REDDY |
| 49 | UI4CE108 | MARRI AKHIL |
| 50 | UI4CE109 | MARRI JHANSI RANI |
| 51 | UI4CE110 | MASHETTY. SATHVIK |


Head of the Dept.
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Senguttur, Chennai - 600 073.



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Topic: Short term Course on Radioecology

Type of Course: value added course / UG

Department of school of Civil and infrastructure Engineering

Pre-Requisites: Environmental Science and Engineering.

Course Duration: 30 hours (28th Mar 2021)

Intended Audience: Civil Engineering students

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

Coordinator: Mrs. B. Saritha

Objectives:

- a) This course aims to make the students to determine the concentrations of radionuclides in the environment.
- b) The students shall be able to understand their methods of introduction.
- c) Sufficient tutorials will be held to enable hands-on experience to the students
- d) Students will be able to outline their mechanisms of transfer within and between ecosystems.
- e) Students shall be able to understand the effects of both natural and artificial radioactivity on the environment itself as well as dosimetrically on the human body.

COURSE OUTLINE:

This course is being conducted at the UG level to enable students and citizens to recognize the increasing vulnerability of the planet in general and India in particular to atomic radiation. Radioecology is the branch of ecology concerning the presence of radioactivity in Earth's ecosystems. Investigations in radioecology include field sampling, experimental field and laboratory procedures, and the development of environmentally predictive simulation models in an attempt to understand the migration methods of radioactive material throughout the environment.

The practice consists of techniques from the general sciences of physics, chemistry, mathematics, biology, and ecology, coupled with applications in radiation protection. Radioecological studies provide the necessary data for dose estimation and risk assessment regarding radioactive pollution and its effects on human and environmental health.

Radioecologists detect and evaluate the effects of ionizing radiation and radionuclides on ecosystems, and then assess their risks and dangers. Interest and studies in the area of radioecology significantly increased in order to ascertain and manage the risks involved as a result of the Chernobyl disaster. Radioecology arose in line with increasing nuclear activities, particularly following the Second World War in response to nuclear atomic weapons testing and the use of nuclear reactors to produce electricity.

They must be interested in the subject matter and willing to look at radioactive pollution issues from both a theoretical perspective as well as from a practical standpoint. This would enrich the teaching learning process. While this course has been developed keeping diverse disciplines in mind the teachers in consultation with the college curriculum committee are welcome to improvise and modify the content. Encouraging creativity of teachers is important.

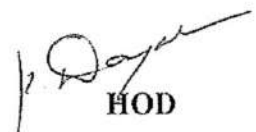
Value Added Course

Short term Course on Radioecology

Content of Syllabus

| S.No. | Syllabus Details | No. of Lecture hrs | Time | Date | Lecturer Name |
|-------|--|--------------------|----------------------|----------|---------------|
| 1 | Introduction to Radioecology | 1 | 10.45 am to 11.45am | 28.03.21 | Mrs.B.Saritha |
| 2 | Environmental radioactivity | 1 | 03.00 pm to 04.00 pm | 28.03.21 | Mrs.B.Saritha |
| 3 | The development of the ICRP philosophy | 1 | 10.45 am to 11.45am | 29.03.21 | Mrs.B.Saritha |
| 4 | Radiation: Causes, Impacts | 1 | 03.00 pm to 04.00 pm | 29.03.21 | Mrs.B.Saritha |
| 5 | Protecting the environment from radiation exposure | 1 | 10.45 am to 11.45am | 30.04.21 | Mrs.B.Saritha |
| 6 | International efforts for restricting discharges of radioactive substances | 1 | 03.00 pm to 04.00 pm | 30.04.21 | Mrs.B.Saritha |
| 7 | Global trends in radiationecology | 1 | 10.45 am to 11.45am | 31.04.21 | Mrs.B.Saritha |
| 8 | Complex emergencies | 1 | 03.00 pm to 04.00 pm | 31.04.21 | Mrs.B.Saritha |
| 9 | Approaches to Radiation Risk Reduction | 1 | 10.45 am to 11.45am | 01.04.21 | Mrs.B.Saritha |
| 10 | Approaches to Radiation Risk Reduction | 1 | 03.00 pm to 04.00 pm | 01.04.21 | Mrs.B.Saritha |
| 11 | Ensuring protection of non-human species | 1 | 10.45 am to 11.45am | 04.04.21 | Mrs.B.Saritha |
| 12 | Prevention and Preparedness | 1 | 03.00 pm to 04.00 pm | 04.04.21 | Mrs.B.Saritha |
| 13 | Prevention, Mitigation and Preparedness | 1 | 10.45 am to 11.45am | 05.04.21 | Mrs.B.Saritha |
| 14 | Roles and Responsibilities of community, States, | 1 | 03.00 pm to 04.00 pm | 05.04.21 | Mrs.B.Saritha |
| 15 | Roles and Responsibilities of Centre, and other stakeholders. | 1 | 10.45 am to 11.45am | 06.04.21 | Mrs.B.Saritha |
| 16 | Inter-relationship between Radiation & Development | 1 | 03.00 pm to 04.00 pm | 06.04.21 | Mrs.B.Saritha |
| 17 | Inter-relationship between Radiation & Development | 1 | 10.45 am to 11.45am | 07.04.21 | Mrs.B.Saritha |

| | | | | | |
|----|---|---|----------------------|----------|---------------|
| 18 | A nuclear industry perspective | 1 | 03.00 pm to 04.00 pm | 07.04.21 | Mrs.B.Saritha |
| 19 | Appropriate technology and local resources | 1 | 10.45 am to 11.45am | 08.04.21 | Mrs.B.Saritha |
| 20 | Hazard and Vulnerability profile of India | 1 | 03.00 pm to 04.00 pm | 08.04.21 | Mrs.B.Saritha |
| 21 | Hazard and Vulnerability profile of India | 1 | 10.45 am to 11.45am | 11.04.21 | Mrs.B.Saritha |
| 22 | Components of Radiation Relief: Water, Food. | 1 | 03.00 pm to 04.00 pm | 11.04.21 | Mrs.B.Saritha |
| 23 | Components of Radiation Relief: Shelter, Health | 1 | 10.45 am to 11.45am | 12.04.21 | Mrs.B.Saritha |
| 24 | Regulatory control of discharges of radioactive material to the environment | 1 | 03.00 pm to 04.00 pm | 12.04.21 | Mrs.B.Saritha |
| 25 | Mitigation, Response and Preparedness | 1 | 10.45 am to 11.45am | 13.04.21 | Mrs.B.Saritha |
| 26 | Mitigation, Response and Preparedness | 1 | 03.00 pm to 04.00 pm | 13.04.21 | Mrs.B.Saritha |
| 27 | Regulatory control of discharges of radioactive material to the environment : A regulator's view | 1 | 10.45 am to 11.45am | 14.04.21 | Mrs.B.Saritha |
| 28 | Regulatory control of discharges to the environment: An operator's view | 1 | 03.00 pm to 04.00 pm | 14.04.21 | Mrs.B.Saritha |
| 29 | Protection of the environment from the effects of ionizing radiation associated with uranium mining | 1 | 10.45 am to 11.45am | 15.04.21 | Mrs.B.Saritha |
| 30 | Regulating non-radioactive environmental pollutants | 1 | 03.00 pm to 04.00 pm | 15.04.21 | Mrs.B.Saritha |


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BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
CERTIFICATE OF PARTICIPATION

This is to Certify that KADHIR SHANKAR .R, Bharath Institute of Higher Education and Research, has participated in value added course on 'Short term Course on Radioecology', presented by Mrs B. Saritha., Associate Professor, School of Civil & Infrastructre Engineering, BIHER, from 2.7.2021 to 22.7.2021

Bairthe

Coordinator

P. S. S. S.

HOD

11/07/2021
Bharath Institute of Higher
Education & Research,
Sankar Chennai - 600 073.

Event Name: Course on Radioecology

Event Venue: Date: BIHER, 15/04/2021

Name of participant: Kadhira Shankar . R

CONTENT

| | | |
|-----------------------------------|-------|----|
| Was the content interesting? | Yes ✓ | No |
| Was the content understandable? | Yes ✓ | No |
| Was there clarity in the content? | Yes ✓ | No |

STRUCTURE

(Rate from 1-5 where 1 being the least)

| | | | | | |
|--|-------|---|---|-----|-----|
| How was the focus of the talk good? | 1 | 2 | 3 | 4 ✓ | 5 |
| How far you found the lecture useful? | 1 | 2 | 3 | 4 | 5 ✓ |
| How far did the lecturer meet your expectations? | 1 | 2 | 3 | 4 | 5 ✓ |
| What struck you about this topic? | _____ | | | | |

PRESENTATION

(Rate from 1-5 where 1 being the least)

| | | | | | |
|---|---|---|---|---|-----|
| How far the lecturer managed to capture your attention? | 1 | 2 | 3 | 4 | 5 ✓ |
| How did you find the lecturer vocabulary? | 1 | 2 | 3 | 4 | 5 ✓ |
| How far audience participation & interaction encouraged? | 1 | 2 | 3 | 4 | 5 ✓ |
| How far the lecturer appeared enthusiastic about the subject? | 1 | 2 | 3 | 4 | 5 ✓ |

OVERALL

| | | | |
|---|-------|---------|----|
| Were you satisfied with the lecture? | Yes ✓ | No | |
| Was the lecturer able to answer your questions? | Yes ✓ | No | |
| What is your overall impression about the lecture? | Good | Average | Ok |
| What suggestions do you have to improve the lecturers approach? | _____ | | |