CERTIFICATE COURSE IN FUNDAMENTALS OF ENVIRONMENTAL ENGINEERING

TOTAL HOURS- 45

Module I: Introduction to Environmental Engineering:
Concepts, characteristics of environmental engineering, civil engineering and environmental engineering, concepts of industrial ecology and its applicability in environmental engineering.

Module II: Environmental engineering and water pollution:
Sources of water pollution, pollutant dynamics in environment, aquatic ecology, self-purification; measurement of water pollution, water quality parameters, water pollution treatment (primary, secondary and tertiary, constructed wetlands), reduction, reuse and recycling techniques. Anaerobic, aerobic process, methanogenesis, bioreactors, cell and protein (enzyme) immobilization techniques; Treatment schemes for waste water, dairy, distillery, tannery, sugar, antibiotic industries;

Module III: Environmental engineering and Solid waste:
Solid waste characterization, dynamics of wastes in environment, management of solid waste (end of the pipeline techniques, management at the origin) and disposal of wastes; reduction, reuse and recycling techniques. Treatment methods (composting, incineration, pyrolysis, sanitary landfills); Waste disposal in landfills (site selection, design, and operation of sanitary landfills, secure landfills and landfill bioreactors); leachate and landfill gas management; landfill closure and post-closure environmental monitoring; landfill remediation). Legislation on management and handling of municipal solid wastes, bio-medical wastes and hazardous wastes, Vermicomposting and vermi-technology.

Module IV: Environmental engineering and Air pollution:
Air pollution characterization, pollutant dynamics in environment, management of air pollution (end of the pipeline techniques, management at the origin) and disposal of wastes; reduction, reuse and recycling techniques.

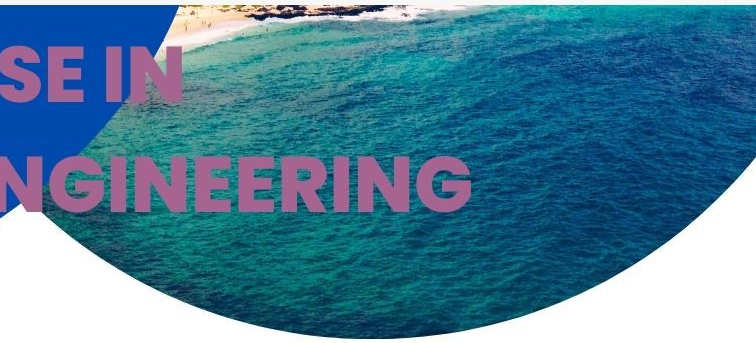
Module V: Environmental engineering and physical pollution:
Physical pollution (noise, radiation, light), pollutant dynamics in environment, management of physical pollution (end of the pipeline techniques, management at the origin) and control techniques.

Suggested Readings:

1. Gilbert, M. M. (1997), Introduction to Environmental Engineering and Science (2nd Edition), Prentice Hall.
2. Brimicombe, A. (2003), GIS, Environmental modeling and engineering, Taylor & Francis, London.
3. Ruth, F. W. and Matthews, R. (2007), Environmental Engineering (4th Edition).

4. Butterworth, H., Glenn, O. S., Delmar D. F., William, J. E. and Richard K. F. (1992), Soil and Water Conservation Engineering, John Wiley & Sons.
5. Vesilind, P. A. (1997), Introduction to Environmental Engineering, PWS Publishing Company, Boston.
6. Stanley, E. M. (1999), Industrial Ecology: Environmental Chemistry and Hazardous Waste (1st edition), CRC Press.
7. Robert, U. A., Leslie, A. (2002). A Handbook of Industrial Ecology, Edward Elgar Publishing Limited.
8. George, T., Franklin, L., Burton and Stensel, H. D. (2003), Waste water engineering - treatment and re-use (4th Edition), Metcalf & Eddy Inc., Tata McGraw Hill, New Delhi.

CHRIST
COLLEGE (AUTONOMOUS)
IRINJALAKUDA, KERALA



CERTIFICATE COURSE IN ENVIRONMENTAL ENGINEERING

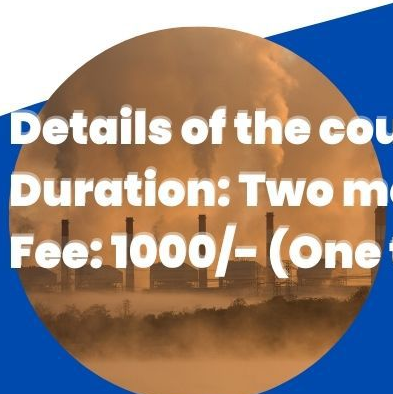
Environmental engineering is a professional engineering discipline that encompasses broad scientific topics like chemistry, biology, ecology, geology, hydraulics, hydrology, microbiology, and mathematics . Environmental Engineering is a very popular discipline of engineering that deals with the issues related to the environment. The Environmental Engineers devote themselves finding out renewable sources of energy and solutions to curb pollution and other environmental issues.

Dr.Subin K Jose
Course Coordinator
Department of Geology and Environmental Science

Dr. Jolly Andrews CMI
Principal
Christ College

PAYMENT DETAILS
A/C Name: Rev Fr Rector And Principal
A/C No.046305300000101
Bank : South Indian Bank Christ Nagar Branch Irinjalakuda
IFSC:SIBL0000463
Course code for Disaster Environmental Engineering course is – COCWENV01.
NB: Please specify your name and course code when you do payment

The course will be conducted online.



Details of the course:
Duration: Two months (35 hours)
Fee: 1000/- (One thousand only)

FOR REGISTRATION SCAN

https://forms.gle/X7mQJFiNiGXCTkaWA

REPORT

An audit course on environmental engineering was conducted as part of our second semester by Dr. Subin K Jose, department of environmental science. The aim of the course was to create awareness on pollution abatement techniques and waste generation methods. It was scheduled for a time period of 45 hours. Online classes were provided every week. The classes were informative. A test was conducted based on the course and certificates were distributed.

CERTIFICATE COURSE IN ENVIRONMENTAL ENGINEERING

Environmental engineering is a professional engineering discipline that encompasses broad scientific topics like chemistry, biology, ecology, geology, hydraulics, hydrology, microbiology, and mathematics . Environmental Engineering is a very popular discipline of engineering that **deals with the issues related to the environment**. The Environmental Engineers devote themselves finding out renewable sources of energy and solutions to curb pollution and other environmental issues.

Department of Geology & Environmental Science
of Christ College has come forward with a Massive Open Online Course (MOOC)
in Environmental Engineering. This course is based on the syllabus of Various University's in India
. The course will be
conducted online.

Dr. Subin K Jose

Course Coordinator

Department of Geology & Env. Science

Dr.Jolly Andrews CMI
Principal, Christ college

REGISTRATION LINK: https://forms.gle/X7mQJFiNiGXCTkaWA

PAYMENT DETAILS
A/C Name: Rev Fr Rector And Principal
A/C No.0463053000000101

Bank : South Indian Bank Christ Nagar Branch Irinjalakuda
IFSC:SIBL0000463

Course code for Disaster Environmental Engineering course is – COCWENV01.
NB: Please specify your name and course code when you do payment

Details of the course:

Duration: Two months (30 hours)

Fee: 500/- (Five hundred only)

Only hundred seats available (first come first basis)
Eligibility: Plus two in any stream (Any one having genuine interest can also join).

For more details contact: josesubin@gmail.com

CHRIST
COLLEGE (AUTONOMOUS)
IRINJALAKUDA. KERALA

CERTIFICATE OF COMPLETION

This to certify that Mr./Ms. ARYA · S· KUMAR has successfully completed the certificate course in Environmental Engineering organized by Department of Geology and Environmental Science , Christ College (Autonomous), Irinjalakuda.

COURSE COORDINATOR
Dr. SUBIN K JOSE

PRINCIPAL
Dr. Fr. Jolly Andrews CMI