

AICTE Sponsored QIP Short Term Course on Characterization and Modeling of Geo-materials

Organized by

**Department of Civil Engineering
Indian Institute of Technology
Madras Chennai - 600 036**

www.civil.iitm.ac.in

Between

17th – 22nd January 2022

Coordinators

**Dr. Ramesh Kannan K
Prof. R. G. Robinson**



ABOUT THE DEPARTMENT

Department of Civil Engineering is one of the oldest departments of IIT Madras and has grown into its current status with specializations in all the major areas of Civil Engineering, such as:

- Building Technology and Construction Management,
- Environmental and Water Resources Engineering,
- Geotechnical Engineering,
- Structural Engineering and
- Transportation Engineering.

The academic programmes, B. Tech., M.S., M. Tech., and Ph.D., of the Civil Engineering Department at IIT Madras are some of the best in the country.

The Geotechnical Engineering division in the Civil Engineering Department was established in the early 1960's. Since then, the division has been offering post-graduate programmes and carrying out advanced research & consultancy projects.

Major areas of research in the Geotechnical Engineering include strength and deformation behaviour of soils, soil dynamics & earthquake engineering, machine foundations, numerical modeling of geotechnical problems, soil stabilization, reinforced earth, experimental and computational geomechanics, geosynthetics, environmental geotechnics and waste disposal, unsaturated soil behaviors, rock mechanics, etc.

IMPORTANT DATES

Last date for applications : 31-12-2021
Intimation of selection : 03-01-2022
Confirmation of participation : 10-01-2022

For further details, please contact:

Dr. Ramesh Kannan K/ Prof. R. G. Robinson

Department of Civil Engineering,
Indian Institute of Technology Madras,
Chennai – 600 036

Tel: +91 - 44 - 22574259/ 22574286

E-mail: rameshkk@civil.iitm.ac.in /
robinson@iitm.ac.in

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Course on**

**Characterization and Modeling of
Geo-materials**

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APPLICATION FORM

**Please fill the Google form using the
link below,**



[Click the form icon or scan QR code](#)

Eligible teachers are requested to submit the filled in application (Google form) along with the sponsorship certificate in the format given below on or before 31-12-2021.

ABOUT THE COURSE:

INTRODUCTION

Soils are naturally occurring materials that are formed due to various geological processes and are extremely complex due to their presence in different phases, states, morphologies, sizes, stress histories and mineralogy. The mechanical behaviour i.e., the strength and deformation characteristics is predominantly governed by these complexities. Designing of structures on or with these geo-materials using appropriate constitutive models requires proper understanding of the behaviour under different conditions. The accuracy of the numerical results largely depends on the accuracy of the characterization and modeling. This short term course aims at introducing recent developments related to characterization and modeling of geomaterials.

COURSE OBJECTIVES

The objectives of the short term course are focused on characterization to constitutive modeling under critical state framework and give a flavor of numerical analysis to solve various geotechnical problems. The course will offer participants a complete perspective on various characterization techniques, interpretation of experimental results, and quantification of model parameters used by advanced constitutive models followed by numerical analysis for solving boundary value problems

COURSE OVERVIEW

- Engineering properties of soils
- Advanced soil testing
- Critical state framework
- Constitutive behaviour of soils
- Dynamic properties of soils
- Numerical methods in geotechnical engineering

COURSE DURATION

The course is of one week duration from 17th to 22nd January 2022.

RESOURCE FACULTY

The resource faculty includes experts from both academic and industry.

ELIGIBILITY

Engineering college teachers from AICTE approved colleges are eligible to apply for the course.

REGISTRATION FEE

There is no course fee for the participants.

MODE

The course will be online, and the attendance during all the sessions is compulsory. The course link will be sent to shortlisted candidates (maximum of 100) by 10th January 2022.

SPONSORSHIP CERTIFICATE FORMAT

Certified that Dr./Sri./Smt. is a faculty of our Institute and is being sponsored hereby for attending the QIP short term course on “Characterization and Modeling of Geo-materials” to be conducted by Department of Civil Engineering, IIT-Madras in online mode from 17th to 22nd January, 2022.

Signature of Sponsoring Authority

(With date and seal)