

INTRODUCTION

Stability analysis of slope is one of the most sought after problem in civil and mining engineering. The stability of natural slopes like hilly terrains, river beds and man made slopes like dams, embankments of highways and railways is the priority of Civil engineers to avoid disasters. Similarly, management of cut slopes and stability of dump slope is very important for mine safety. Gravitational force, force due to seepage, sudden drawdown cases and seismic forces are governing factors affecting the stability of slopes. The limit equilibrium method (LEM) based on equations of static equilibrium, calculates the factor of safety (FOS) without any information about stress-strain in the soil mass. The developments of stability analysis of slope have closely followed the developments in computational mechanics. The present course aims at familiarising the professional engineers on different slope stability methods and their applicability to different problems.

SCOPE

Out of different methods like limit analysis, finite element method, finite difference method, boundary element method, The LEM is more popular as it is easy to do the analysis. However, over the years the basic materials for the dykes/small dams are

changing particularly for check dams, tailing dams, ash ponds etc. In these cases the stress – strain information is very important along with the factor of safety value. Hence, there is a need of analyzing slopes using finite element method (FEM). In the proposed short term course it is intended to discuss the application of FEM to slope stability analysis vis-a-vis the traditional LEM. The use of FEM based software-PLAXIS will be used to analysis different types of slopes i.e. embankment, dump slope, tailing dams, mine cut slopes, hilly terrains etc. to find out the factor of safety and corresponding stress- strain conditions.

THEMES

The broad outline of the course is as follows but not limited to:

- Natural and manmade slopes
- Classification of slopes
- Factors affecting stability of slopes
- Slope stability analysis methods
- Computer methods for slope stability analysis
- Case studies

TEQIP-II SHORT TERM COURSE

ON

SLOPE STABILITY ANALYSIS FOR CIVIL & MINING ENGINEERS

September 28-30, 2016



Coordinators

Sarat Kumar Das

Department of Civil Engineering

Sk. Md Equeenudin

Department of Earth & Atmos. Sc



National Institute of Technology, Rourkela
Odisha- 769008, India

WHO SHOULD ATTEND

The course is specially designed for professional engineers of both civil and mining engineering. The course includes real field examples of slopes and their solution using the commercial softwares. The course will help the professional engineers in getting the confidence of design, construction and maintenance of check dams, tailing dams and ash ponds.

RESOURCE PERSONS

The resource persons includes academicians and professionals from NIT, IIT and other central government institutions.

VENUE

The short term course will be conducted in Civil engineering department, National Institute of Technology, Rourkela, Odisha-769008

ACCOMMODATION

Free accommodation will be provided in the Institute on twin sharing basis with accommodation and fooding.

IMPORTANT DATES

**Submission of Application form
: 26th September 2016**

REGISTRATION FEE

The registration fee is free for the participants from the Industry. However, the application must be duly forwarded by the competent authority of the organizations.

CONTACT ADDRESS

Dr. Sarat Kumar Das

Co-ordinator

Department of Civil Engineering,

Ph: 91-9437390601(M)

E-mail: sarat@nitrrkl.ac.in

saratdas@rediffmail.com

Dr. Sk. Md Equeenudin

**Department of Earth & Atmospheric
science,**

Ph: 91-9778548959(M)

E-mail: equeen@nitrrkl.ac.in

TEQIP-II Sponsored Short term Course on

“SLOPE STABILITY ANALYSIS FOR CIVIL & MINING ENGINEERS”

Sept 28-30, 2016

Registration Form

Name(s).....

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Affiliation(s).....

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Address.....

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Phone/Fax.....

Email.....

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Date:.....Signature:.....

Signature and seal of

Forwarding Authority