



DEMAND

PAVIATH INTEGRATED SOLUTION

CIVIL ENGG

CIVIL UNIV

GROUND IMPROVEMENT TECHNIQUES

Paviath ONLINE

◆ CIVIL UNIVERSITY ◆ THIRD YEAR II SEMESTER ELECTIVE II ◆ CODE AB0127

UNIT - I

INTRODUCTION TO GROUND MODIFICATION: NEED AND OBJECTIVES. IDENTIFICATION OF SOIL TYPES, IN SITU AND LABORATORY TESTS TO CHARACTERISE PROBLEMATIC SOILS; MECHANICAL, HYDRAULIC, PHYSICO-CHEMICAL, ELECTRICAL, THERMAL METHODS, AND THEIR APPLICATIONS.

UNIT - II

MECHANICAL MODIFICATION - DEEP COMPACTION TECHNIQUES- BLASTING VIBROCOMPACTION, DYNAMIC TAMPING AND COMPACTION PILES.

UNIT - III

HYDRAULIC MODIFICATION - OBJECTIVES AND TECHNIQUES, TRADITIONAL DEWATERING METHODS AND THEIR CHOICE, DESIGN OF DEWATERING SYSTEM, ELECTRO-OSMOSIS, ELECTRO-KINETIC DEWATERING, FILTRATION, DRAINAGE AND SEEPAGE CONTROL WITH GEOSYNTHETICS, PRELOADING AND VERTICAL DRAINS.

UNIT - IV

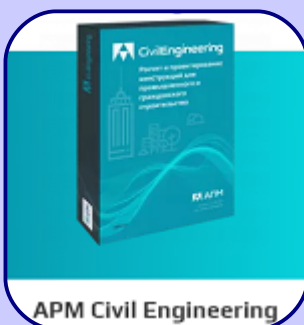
PHYSICAL AND CHEMICAL MODIFICATION - MODIFICATION BY ADMIXTURES, SHOTCRETING AND GUNITING TECHNOLOGY, MODIFICATION AT DEPTH BY GROUTING, CRACK GROUTING AND COMPACTION GROUTING, JET GROUTING, THERMAL MODIFICATION, GROUND FREEZING.

UNIT - V

MODIFICATION BY INCLUSIONS AND CONFINEMENT - SOIL REINFORCEMENT, REINFORCEMENT WITH STRIP, AND GRID REINFORCED SOIL. IN-SITU GROUND REINFORCEMENT, GROUND ANCHORS, ROCK BOLTING AND SOIL NAILING.

EXT BOOKS

1. HAUSMANN, M. R. (1990) - ENGINEERING PRINCIPLES OF GROUND MODIFICATIONS, MCGRAW HILL PUBLICATIONS, REFERENCES:
1. KOERNER, R. M (1994) - DESIGNING WITH GEOSYNTHETICS - PRENTICE HALL, NEW JERSEY.
2. JONES C. J. F. P. (1985) - EARTH REINFORCEMENT AND SOIL STRUCTURES - BUTTERWORTHS, LONDON.
3. XIANTHAKOS, ABREIMSON AND BRUCE - GROUND CONTROL AND IMPROVEMENT
4. MOSLEY - GROUND IMPROVEMENT.



APM Civil Engineering

STC APM

SYLLABUS COACHING
TRAINING - 2/UNIT TRAINING
SELF - 4/UNIT ASSIGNMENT
PRESENTATION - 2/UNIT
SHOWTIME - 2/UNIT



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SYLLABUS PERIOD
TRAINING - 2/2 HRS/UNIT
REMOTE - 2/2 HRS/UNIT
DURATION - SEMESTER
ONLINE/REMOTE ACCESS



ARCADIA BIM

FEATURES
TRAINING BY IND. PROFESSIONAL
INDUSTRY APPLICATION
TRAINER OPPORTUNITY
CERTIFICATION