

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Advanced Foundation Engineering

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Out line of Course:

1. Site characterization, Field investigation
2. Design of mat foundation
3. Deep Foundation
 - 3.1. Design of single pile
 - 3.2. Horizontally_Loaded_Single_Piles
 - 3.3. Vertically Loaded Pile Groups
 - 3.3. Horizontally Loaded Pile Groups
 - 3.4. Design_of_Piled_Raft_Foundations
4. Sheet piles
5. Excavation
6. Slope Stability
7. Reinforced soils
8. Soil improvements
9. Foundation on problematic soils



References:

- 1. Donald P. Coduto, Foundation Design, principals and practices, 2001,*
- 2. Bowles J. E. Foundation Analysis and Design, Mc Graw Hill, 1997*
- 3. poulus, H.G. & Davis, E. H. , Pile Foundation analysis and Design, 1980*
- 4. Michael Tomlinson & John Woodward, Pile Design and Construction practice, 5th Edition, Taylor & Francis, 1997*
- 5. Das B. J. Principals of Geotechnical Engineering ,*
- 6. Fang H. Y. Foundation Engineering Handbook, 2001, CBS Publisher, second Edition*
- 7. Iranian codes No. 223, 224, , 231, 243*
- 8- Iranian national Building Code, Part 7*



* **Assessments:**

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| <i>Midterm Exam:</i> | <i>20%</i> |
| <i>Term Paper:</i> | <i>20%</i> |
| <i>Final Exam</i> | <i>60%</i> |

Midterm Exam Date: 1389/ 9/10

