Instructor
Dr. Yasser Abdelghany Ph.D.; P.Eng.
E-mail: abdelgha@uvic.ca

Office Hours
Days: TBD
Time: TBD
Location: TBD

List all prerequisites and co-requisites: 285, MECH 220

LECTURE DATE(S)

| Section: A01 /CIVE 480A | Days: MTh | Time: MTh 11:30 am - 12:50 pm | Location: Engineering Comp Science Bldg 108 |

Lecture times and locations are also available from the timetable through Sign in to UVic, My Page.

TA Name
Peiman Azarsa
E-mail: azarsap@uvic.ca
Office: To Be Announced

Required Text:
Title: Principles of Foundation Engineering 8th Ed.
Author: B. Das
Publisher/Year: Nelson 2014

Optional Text
Reference
Title: Principles of Geotechnical Engineering 8th Ed.
Author: B. Das & K. Sobhan
Publisher/Year: Nelson 2014

COURSE OBJECTIVES: To develop understanding of the concepts, theories and procedures of design for different types of foundations. The students will learn to calculate the capacity of shallow and deep foundations. Also, they will learn how to evaluate the performance of these foundations under static loads.

LEARNING OUTCOMES: At the end of this course, students will be able to:

- Learn how to implement a Soil Investigation Program and perform Soil Classification Analyses
- Judge when shallow foundations should be considered and Recognize the failure modes of shallow foundations and Determine the bearing capacity of shallow foundations on soils and learn to calculate vertical stress distribution below a shallow foundation and Find the primary consolidation settlement of shallow foundations on cohesive and non-cohesive soils
- Learn about the when you can effectively use piles foundations and what shall be considered during the design phase and Grasp the principles and the detailed design process of piles foundations under vertical and lateral loads together with settlement analyses.
• Develop confidence in piles foundations design under vertical and lateral loads gained from detailed design examples and achieve knowledge principles in the pile foundations design.
• Use analytical techniques for shallow and deep foundation systems design, as well for slope stability and retaining walls design.

<table>
<thead>
<tr>
<th>Weight &amp; Date(s) of Assessments</th>
<th>Weight</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments and Quizzes</td>
<td>15%</td>
<td>TBD</td>
</tr>
<tr>
<td>Individual Project</td>
<td>15%</td>
<td>TBD</td>
</tr>
<tr>
<td>Mid-term</td>
<td>20%</td>
<td>Date: Thursday, June 16th, 2016</td>
</tr>
<tr>
<td>Final Exam</td>
<td>50%</td>
<td>Date: TBA</td>
</tr>
</tbody>
</table>

**ASSIGNMENTS and QUIZZES**

Minimum Five problem sets will be distributed over the course of the term. The assignment problems will be predominantly hand calculations. **Assignments are to be completed individually.** Assignment hardcopy submissions are to be made to the CIVE 480A in the Class in its due date. Hardcopy submissions must be completed. Also few Quizzes for assigned problems will be used to evaluate students understanding and performance and to be solved individually in the class.

**NOTE:**
Failure to complete all laboratory requirements will result in a grade of N being awarded for the course. Failure to pass the final exam will result in a failing grade for the course.

The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

**COURSE LECTURE NOTES**

Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

**There will be no supplemental examination for this course.**

**GENERAL INFORMATION**

**Note to Students:**
Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair’s Secretary to set up an appointment.

**Attendance**
Students are expected to attend all classes in which they are enrolled. An academic unit may require a student to withdraw from a course if the student is registered in another course that occurs at the same time....

An instructor may refuse a student admission to a lecture, laboratory, online course discussion or learning activity, tutorial or other learning activity set out in the course outline because of lateness, misconduct, inattention or failure to meet the responsibilities of the course set out in the course outline. Students who neglect their academic work may be assigned a final grade of N or debarred from final examinations.

Students who do not attend classes must not assume that they have been dropped from a course by an academic unit or an
instructor. Courses that are not formally dropped will be given a failing grade, students may be required to withdraw and will be required to pay the tuition fee for the course.” UVic Calendar, (2015) http://web.uvic.ca/calendar2015-09/FACS/UnIn/UARe/Atte.html

Accommodation of Religious Observance (AC1210) http://web.uvic.ca/calendar2015-09/GI/GUPo.html

Discrimination and Harassment Policy (GV0205) http://web.uvic.ca/calendar2015-09/GI/GUPo.html

Faculty of Engineering, University of Victoria Standards for Professional Behaviour “It is the responsibility of all members of the Faculty of Engineering, students, staff and faculty, to adhere to and promote standards of professional behaviour that support an effective learning environment that prepares graduates for careers as professionals...”

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour which contains important information regarding conduct in courses, labs, and in the general use of facilities. http://www.uvic.ca/engineering/current/undergrad/index.php #section0-23

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the Undergraduate Calendar for the UVic policy on academic integrity.

Policy on Academic Integrity http://web.uvic.ca/calendar2015-09/FACS/UnIn/UARe/PoAcI.html

Course Schedule

<table>
<thead>
<tr>
<th>Module</th>
<th>Topics</th>
<th>Date/Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction, Geotechnical Properties and Exploration of Soil</td>
<td>Start May 2nd,</td>
</tr>
<tr>
<td>2</td>
<td>Foundations Analysis</td>
<td>TBD</td>
</tr>
<tr>
<td>2-A</td>
<td>Deep Foundations</td>
<td></td>
</tr>
<tr>
<td>2-B</td>
<td>Shallow Foundations</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Lateral Earth Pressure and Earth-Retaining Structures</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Soil Improvement</td>
<td></td>
</tr>
</tbody>
</table>