Course Syllabus – Summer 2013
CE 4320: EARTH STRUCTURES DESIGN
MW 8:00 – 9:50 AM
Room NH 229

Instructor: Laureano R. Hoyos, Ph.D., P.E.

Office Location: NH 441

Telephone Number: 817 272 3879

Email Address: lhoyos@uta.edu

Office Hours: MW (10:30 AM – 1:00 PM)

Course Objective: The course provides the fundamental concepts for the analysis and design of most commonly used earth retaining structures, including reinforced concrete cantilever walls, sheet pile walls, mechanically stabilized earth (MSE) walls, and engineered earth slopes.

Prerequisites: CE 3343 (Soil Mechanics), or consent of instructor.

Reference Textbook:
(1) Das, B.M. (2004). Principles of Foundation Engineering. Thomson Learning

Additional References:
(1) Coduto, D.P. (2001). Foundation Design: Principles and Practices. Prentice Hall.
(2) Abramson, L.W., Lee, T.S., Sharma, S., and Boyce, G.M. (2002). Slope Stability and Stabilization Methods. John Wiley & Sons.

Major Assignments and Examinations: A series of homework assignments, two midterm exams, and one comprehensive final exam. All homework assignments must be turned in at the start of the class period in which they are due. Failure to do so will constitute a grade of zero for the homework assignment in question. One week of advanced notice will be provided in scheduling each midterm exam. The final exam will be given according to the university's published final exams schedule. Unexcused failure to appear for an exam at the scheduled time will constitute a grade of zero in that exam.

Grading Policy: Arithmetic average of all assigned homeworks (15%), Midterm exams (25% each), and Final exam (35%). Final Grading Scale: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 59 or less.

Attendance Policy: Class attendance and punctuality are expected. (No special accommodations will be made for incomplete or missed assignments and exams due to unexcused absences.)

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. Contact the Financial Aid Office for more information.

Americans With Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112: The Rehabilitation Act of 1973 as amended. With the passage of federal legislation entitled *Americans with Disabilities Act (ADA)*, pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens. As a faculty member, I am required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty of their need for accommodation and in providing authorized documentation through designated administrative channels. Information regarding specific diagnostic criteria and policies for obtaining academic accommodations can be found at www.uta.edu/disability. Also, you may visit the Office for Students with Disabilities in room 102 of University Hall or call them at (817) 272 3364.

Academic Integrity: It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University: "Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Series 50101, Section 2.2)

Student Support Services Available: The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and

federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817 272 6107 or visit www.uta.edu/resources for more information.

Electronic Communication Policy: The University of Texas at Arlington has adopted the University "MavMail" address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. Students are responsible for checking their MavMail regularly. Information about activating and using MavMail is available at http://www.uta.edu/oit/email/. There is no additional charge to students for using this account, and it remains active even after they graduate from UT Arlington. To obtain your NetID or for logon assistance, visit https://webapps.uta.edu/oit/selfservice/. If you are unable to resolve your issue from the Self-Service website, contact the Helpdesk at helpdesk@uta.edu.

Final Review Week: A period of five class days prior to the first day of final examinations is designated as Final Review Week. During this week, no new assignments will be given; however, previously assigned work may have a completion date during this week. In addition, no portion of the final examination shall be administered during the Final Review Week. Classes are held as scheduled during this week and the material covered in lectures during this week may be included in the final examination.

Librarian to Contact: Sylvia George-Williams, Science and Technology Library, sylvia@uta.edu, (817) 272 7519.

Make-Up Exam Policy: No make-up exams will be given except for medical or other similar hardships where advanced arrangements are made with the instructor; or in case of non-selective medical emergencies with appropriate physician's note or documentation. Other than circumstances described above, failure to take the exam at the scheduled time will constitute a grade of zero in the exam.

Grade Grievance Policy: Grade grievances will be handled according to the policy described in the College of Engineering portion of the Catalog.

Tested Explicitly Component:

The Civil Engineering Department ABET accreditation procedure includes assessing the achievement of various departmental student learning outcomes (http://www.uta.edu/ce/accreditation.php). The procedure includes explicit testing of the achievement of the departmental student learning outcomes.

CE 4320 Earth Structures Design is designated as a "Design" course, and will involve explicit testing of ABET outcome "c". This will be achieved through specific problems given to test student knowledge of the outcome, which is reproduced below:

CE Department Outcome "c" – An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

The first midterm exam will be designated as the explicit assessment tool for student achievement of outcome "c" in this course. The total grade of this exam will be 100. A minimum grade of 70 will be deemed to signify that a student has satisfactorily achieved the outcome. The TE exam will also be counted towards the final grade for this course. (More details will be discussed later in the course.)

ABET Student Learning Outcomes:

An ability to apply knowledge of mathematics, science, and engineering	a
An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	c
An ability to identify, formulate and solve engineering problems	e
An understanding of professional and ethical responsibility	f
An ability to communicate effectively	g
The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context	h
A recognition of the need for, and an ability to engage in life-long learning	i
A knowledge of contemporary issues	j
An ability to use the techniques, skills and modern engineering tools necessary for engineering practice	k