CE 3342: Water Resources Engineering
Summer 2017

Instructor: Habib Ahmari, Ph.D., P.E.

Office Number: Nedderman Hall, Rm 405

Office Telephone Number: 817-272-6588

Email Address: habib.ahmari@uta.edu

Time and Place of Office Hours: Mon/Wed 1:30 -3:00 pm

The office hours listed above are available for the instructor to assist students, and students are highly encouraged to use them. Other times are possible by appointment.

Section Information: CE 3342-001 and 101

Time and Place of Class Meetings: Mon/Wed 8:00 –10 am. (Rm: WH221)

GTA: TBD

GTA Office Hours: TBD

Description of Course Content: Hydrologic cycle, precipitation, evapotranspiration, water budget, rainfall-runoff, hydrographs, groundwater flow, catchment hydrology, probability concepts in design, hydrologic modeling, open channel hydraulics, pumps.

Student Learning Outcomes: Upon completion of this course, students will have gained understanding of:

- what water resources engineering is, about and for,
- the key elements of hydrologic cycle,
- the basics of catchment hydrology,
- groundwater hydrology,
- hydrologic design, and
- open channel flow, water systems, and pump design

Required Textbooks and Other Course Materials:

Hydrology and Hydraulic Systems, Ram S. Gupta, Waveland Press, Inc.

- An incomplete copy of the instructor's course notes will be posted on Blackboard in advance. The student may complete the course notes in the class. The course notes is not, by no means, a substitute for the textbook.

- Additional references and reading materials may be assigned if necessary.

Descriptions of major assignments and examinations:

Homework:

Reference material should be read before the class in which it will be discussed. Homework assignments will be given throughout the semester. The completion of these assignments is an essential means of achieving the learning outcomes. Problem sets are due a week later unless otherwise specified. Late problem sets will not be accepted. Solutions are to be done neatly with answers clearly indicated and with all equations used clearly written. Key assumptions must be stated. Missed homework will count as zero and may not be submitted by other students.

Exams: There will be two mid-term exams and the final exam.

- Mid-term exams are scheduled for **July 3**, and **July 26, 2017** during the class meeting.
- Final Exam: Date and time are based upon pre-determined University schedule. It is currently listed as **Aug 14, 2017, 8:00–10:00 a.m**., but check the University schedule for any changes.
- Mid-term and Final exams are closed book; however, a single sheet of 8.5× 11 inches paper with relevant formulas is permitted. No solved problems are permitted on the sheet. The formula sheet shall be submitted with the exam upon completion.

Attendance: Attendance for all class sessions is expected, although it will not be recorded as part of the grading process. For the majority of the semester, attendance will not be taken unless a change in grading policy is indicated during the course.

Requirements: Grade of C or better in CE 3301; grade of C or better in CE 3305; concurrent enrollment in CE 3142

Grading:

Homework	15%
Mid-Term Exam #1	25%
Mid-Term Exam #2	25%
Final Exam	35%
Total	**100%**

90-100%	A
80-89.5%	B
70-79.5%	C
60-69.5%	D
<60%	F

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels; see "Student Support Services," below.

Make-up Exams: No make-up exams will be given except for medical or similar circumstances where advanced arrangements are made with the instructor; or in case of medical emergencies with appropriate physician's note or documentation. Other than above-mentioned circumstances failure to attend the exam session at the scheduled time will constitute a grade of zero in the exam.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 6-9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

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. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the Americans with Disabilities Act (ADA). All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from

participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents' Rule 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate**.**

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT 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. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at www.uta.edu/resources.

Blackboard: Handouts, notes, problems, solutions and other information may be found on Blackboard.

Course Schedule

Week	Chapter
1	1- Demand for Water
1-2	2- Availability of Water (Chapters 2, 3, 4)*
3	3- Theory of Groundwater Flow (Chapter 5)*
4	4- Applications and Development of Groundwater Flow (Chapter 6)*
5	**Review & Mid-term Exam I**
6	5- Estimation of Surface Water Flow (Chapter 9)*
7	6- Computation of Extreme Flows (Chapter 11)*
8	**Review & Mid-term Exam II**
9	7- Open Channel Flow (Chapter 12, 14)*
10	8- Pressure Flow Systems Pipes and Pumps (Chapter 15)*
11	**Review & Final Exam**

*Corresponding chapters in the textbook (4^{th} Edition)

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381

This final section is <u>not</u> part of the syllabus template, but a message from the UT Arlington Library.

Faculty members should feel free to incorporate any of the following information into your course syllabus or other course materials.

Library Home Page	http://www.uta.edu/library
Subject Guides.....	http://libguides.uta.edu
Subject Librarians	http://www.uta.edu/library/help/subject-librarians.php
Course Reserves	http://pulse.uta.edu/vwebv/enterCourseReserve.do
Library Tutorials	http://www.uta.edu/library/help/tutorials.php
Connecting from Off- Campus.....	http://libguides.uta.edu/offcampus
Ask A Librarian.....	http://ask.uta.edu

The subject librarian for your area can work with you to build a customized course page to support your class if you wish. For examples, visit http://libguides.uta.edu/os and http://libguides.uta.edu/pols2311fm .