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| INSTRUCTOR: | Jian Luo, jianluo@ce.gatech.edu |
| CLASS: | This course will be taught online asynchronously from GT-Shenzhen campus; synchronous online lectures (MTh 9pm – 10:15pm) will also be available (link will be provided), but participation is not required. |
| TA: | Minjae Kim, Mason 2230, mkim810@gatech.edu |
| Office Hours: | Jian Luo: online sessions will be provided Minjae Kim: In person (MWF 11am – 1pm), individual appointment as needed, online sessions will be provided |
| PREREQUISITE: | Basic Fluid Mechanics and calculus. |
| TEXT: | No textbook required. |
| REFERENCE BOOK: | Physical Hydrogeology (C.W. Fetter), Contaminant Hydrogeology (C.W. Fetter), Groundwater (R. Freeze and J. Cherry), Groundwater Mechanics (O. Strack), Groundwater Hydraulics and Pollutant Transport (R.J. Charbeneau) |
| HOMEWORK: | Homework problems will be assigned and collected roughly every 2-3 weeks according to the schedule. You may work in groups, but independent homework solutions must be turned in. |
| EXAMS: | Final project |
| GRADES: | Your final grade will be based on homework problems (60%) and course project (40%). |
| HONOR CODE: | <ul style="list-style-type: none">Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit http://www.catalog.gatech.edu/policies/honor-code/ or http://www.catalog.gatech.edu/rules/18/. Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.Plagiarizing is defined as “to steal and pass off (the ideas or words of another) as one's own: use (another's production) without crediting the source.” If caught plagiarizing, you will be dealt with according to the GT Academic Honor Code.When working on homework, you may work with other students in the class. However; you must turn in separate versions of the homework with the following written on it: |

your name and the names of everyone you collaborated with.

- Cheating off of anyone else's work is a direct violation of the GT Academic Honor Code, and will be dealt with accordingly.
- Unauthorized use of any previous semester course materials, such as tests, quizzes, homework, projects, and any other coursework, other than that provided by the instructor, is prohibited in this course. Using these materials will be considered a direct violation of academic policy and will be dealt with according to the GT Academic Honor Code

COURSE TOPICS AND SCHEDULE:

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| Introduction and Nature of Groundwater | 1 week |
| Darcy's Law and Hydraulic Properties | 2 weeks (HW 1) |
| Heterogeneity, Anisotropy, and Flow Nets | 2 weeks (HW 2) |
| Development of the Groundwater Flow Equation | 2 weeks |
| Analytical solutions | 1 week (HW 3) |
| Aquifer Test Analysis and Image Well Theory | 3 weeks (HW 4) |
| Numerical Modeling of Groundwater Flow | 2 weeks |
| Groundwater quality and Contaminant Transport | 2 weeks (Final project) |
| Introduction to Groundwater Remediation | 1 week |

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.