

Spring 2019  
**CEVE 498/898 – River Hydraulics and Sediment Transport**

- Instructor:** Dr. Junke (Drinker) Guo, Dept. Civil Eng., PKI 204D  
Phone: 554-3873, E-mail: [jguo2@unl.edu](mailto:jguo2@unl.edu)
- When:** MW 3:00 pm – 4:15 pm
- Where:** PKI 160
- Office hour:** MTWR 3:45 – 5:00 PM
- Prerequisites:** CIVE 310
- Textbook:** *Erosion and Sedimentation*, Pierre Y. Julien, Cambridge University Press, 2<sup>nd</sup> ed., 2010, ISBN 0-521-44237-0
- Objectives:** Apply hydraulic principles to river flow and sediment transport, and learn analysis skills of erosion, transport, and sedimentation of soil particles.
- Topics:**
1. River hydraulics (shear stress, velocity profile, discharge)
  2. Sediment transport (settling velocity, sediment initiation, bedload, suspended load, total load, and reservoir sedimentation)
  3. Local scour around hydraulic structures
- Outcomes:** This course is contributing towards your education as follows:
1. Understand principles of mathematics, science and engineering.
  2. Use appropriate modern techniques, skills and tools.
  3. Communicate technically and effectively.
  4. Understand the impact of engineering on global and societal issues.
  5. Have knowledge of contemporary issues.
- Computer Usage:** Spreadsheets or MatLab
- Final Grades:**
- |            |          |           |        |
|------------|----------|-----------|--------|
| 97-100 A+, | 93-96 A, | 90-92 A-  |        |
| 87-89 B+,  | 83-86 B, | 80-82 B-  |        |
| 77-79 C+,  | 73-76 C, | 70-72 C-  |        |
| 67-69 D+,  | 63-66 D, | 60-62 D-, | < 60 F |
- Grade Breakdown:**
- |            |     |
|------------|-----|
| Attendance | 20% |
| Homework   | 80% |
- Homework:** 3 homework sets (mini projects) will be assigned
- Final:** No final exam
- Note:** Dr. Guo reserves the right to adjust the grading scale according to each exam.