

# Irrigation and Drainage Engineering

*Department of Biological Systems Engineering*

AGEN 453/853 or BSEN453/853

<b>Schedule</b>	Lecture: MW @ 2-3:50 PM in CHA 149 Office Hours: By appointment
<b>Instructor</b>	Dr. Daran Rudnick 232 L.W. Chase Hall Email: daran.rudnick@unl.edu; Phone: (712) 204-6772
<b>TAs</b>	Jamie Duan, PhD student, jduan4@huskers.unl.edu
<b>Prerequisites</b>	CIVE or MECH 310 and AGEN /BSEN 344; or permission
<b>Text (optional)</b>	<b><i>Irrigation and Drainage Engineering</i></b> , by Waller & Yitayew 2016, Springer International Publishing

Handouts and manufacturer's literature will be provided

<b>Objectives</b>	The course focuses on the analysis, design, and management of irrigation and drainage systems. It is intended for advanced undergraduate or beginning graduate students with limited backgrounds in irrigation and drainage. Students will gain exposure to soil water relationships; plant water use relationships; water pumping and conveyance; water quality; sprinkler, micro, and furrow irrigation; drainage; and water resource management. Students will learn how to design and manage systems for improved water management.
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<b>Final Grade</b>	Assignments/Reports/Activities: 50% Mid-term Exam I: 15% Mid-term Exam II: 15% Final Exam or Project: 20%
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## **Grading Scale**

96 - 100.0% = A+	93 - 95.9% = A	90 - 92.9% = A-
86 - 89.9% = B+	83 - 85.9% = B	80 - 82.9% = B-
76 - 79.9% = C+	73 - 75.9% = C	70 - 72.9% = C-
66 - 69.9% = D+	63 - 65.9% = D	60 - 62.9% = D-
< 60.0 = F		

Initial scores may be scaled before assigning grades.

<b>Attendance</b>	Attendance is not mandatory, but encouraged. Discussions during class time are helpful to engage with the instructor and work on assignments or class activities. All graded assignments and exams will have due dates provided when assigned. Students will need to contact the instructor about missed deadlines and provide documentation for excused absences. Late work may be accepted but will be penalized by a 50% or more reduction in total points. Unexcused absences for exams may not be made up. Please contact the instructor ahead of time, if possible, about missing an exam. You are responsible for all announcements and assignments made in class, even if they are not posted on Canvas.
<b>Writing Center</b>	The Writing Center, located in 102 Andrews Hall and satellite locations from 5-7 pm in Adele Hall, is a free service for all UNL students, faculty, and staff. You can work with an individual writing consultant on any type of writing at any stage in your writing process. For an appointment, call 472-8803.
<b>Academic Dishonesty</b>	Academic honesty is essential to the existence and integrity of an academic institution. The responsibility for maintaining that integrity is shared by all members of the academic community. The University's Student Code of Conduct ( <a href="http://stuafs.unl.edu/ja/code/">http://stuafs.unl.edu/ja/code/</a> ) addresses academic dishonesty. Students who commit acts of academic dishonesty are subject to disciplinary action and are granted due process and the right to appeal any decision.
<b>ADA and Accommodation</b>	Students with disabilities are encouraged to contact me (the instructor or teaching assistant) for a confidential discussion of their individual needs for academic accommodation as determined by Services for Students with Disabilities (SSD). This includes students with mental health disabilities like depression and anxiety. It is the policy of the University of Nebraska-Lincoln to provide individualized accommodations to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with SSD which is located 117 Louise Pound Hall (472-3787).
<b>Counseling and Psychology Services</b>	UNL offers a variety of options to students to aid them in dealing with stress and adversity. Counseling and Psychological & Services (CAPS) is a multidisciplinary team of psychologists and counselors that works collaboratively with Nebraska students to help them explore their feelings and thoughts and learn helpful ways to improve their mental, psychological and emotional well-being when issues arise. CAPS can be reached by calling 402-472-7450. Big Red Resilience & Well-Being (BRRWB) provides one-on-one well-being coaching to any student who

wants to enhance their well-being. Trained well-being coaches help students create and be grateful for positive experiences, practice resilience and self-compassion, and find support as they need it. BRRWB can be reached by calling 402-472-8770.

**Diversity & Inclusion**

The University of Nebraska-Lincoln does not discriminate on the basis of race, ethnicity, color, national origin, sex (including pregnancy), religion, age, disability, sexual orientation, gender identity, genetic information, veteran status, marital status, and/or political affiliation. Trespass Policy (Regents' Policy 6.4.7).

The areas of University academic, research, public service, and administrative buildings of the University used for classrooms, laboratories, faculty and staff offices, and the areas of University student residence buildings used for student living quarters are not open to the general public. Any person not authorized to be or remain in any such building area will be deemed to be trespassing on University property and may be cited and subject to prosecution for criminal trespass in violation of Neb. Rev. Stat., § 28-520 or § 28-521.

**Emergency Response**

**Fire Alarm (or other evacuation):**

In the event of a fire alarm, gather belongings (purse, keys, cellphone, N-Card, etc.) and use the nearest exit to leave the building. Do not use the elevators. After exiting notify emergency personnel of the location of persons unable to exit the building. Do not return to building unless told to do so by emergency personnel.

**Tornado Warning:**

When sirens sound, move to the lowest interior area of building or designated shelter. Stay away from windows and stay near an inside wall when possible.

**Active Shooter:**

- Evacuate: if there is a safe escape path, leave belongings behind, keep hands visible and follow police officer instructions.
- Hide out: If evacuation is impossible secure yourself in your space by turning out lights, staying quiet, closing blinds and barricading doors if possible.
- Take action: As a last resort, and only when your life is in imminent danger, attempt to disrupt and/or incapacitate the active shooter.

**UNL Alert:**

Notifications about serious incidents on campus are sent via text message, email, unl.edu website, and social media. For more information go to: <http://unlalert.unl.edu>.

Additional Emergency Procedures can be found here:  
[http://emergency.unl.edu/doc/Emergency\\_Procedures\\_Quicklist.pdf](http://emergency.unl.edu/doc/Emergency_Procedures_Quicklist.pdf)