**Instructor:** Dr. Katherine Clancy
Come to Office Hours for Help

Zoom link for virtual office hours : https://wisconsin-edu.zoom.us/my/kclancy

**E-mail:** kclancy@uwsp.edu

The course is "housed" in the Canvas course software. Office hours, assignment due dates, details, etc. are in Canvas. Tutor information is also located in Canvas.

## Course Information

**Course Description:** Characterization and quantification of the hydrologic cycle

### Textbook & Course Materials

Hydrology Textbook: Environmental Hydrology 2nd Ed by Andy Ward and Stanley Trimble (W&T)
Statistics in Water Resources (provided as an electronic pdf, see the canvas)

https://www.uwsp.edu/canvas/Pages/default.aspx
**Expectations:** Understand basics of how to use a spreadsheet (i.e. excel) and college algebra and statistics.
**Learning Outcomes:** After completing the reading assignments and laboratories in this course you should be able to do the following:

1. Describe the basic physical processes involved in the hydrologic cycle.
2. Obtain and interpret hydrologic and climatic data.
3. Apply appropriate statistical analysis to hydrologic data.
4. Summarize and describe hydrologic data in graphical and tabular form.

**Changes to the course schedule may occur. Graded Course Activities. For details and due dates, please check canvas or any updates.**

| Week Start Day | Week | Lecture Topic (lecture notes on canvas) | Readings in addition to Lecture Powerpoints | Lab/Homework Topic (subject to change) | Lab Period |
|---|---|---|---|---|---|
| Jan 22 | 1 | Characterizing the Hydrologic Cycle | 1.1-1.4 (W&T) | Stats Homework | No lab |
| Jan 29 | 2 | Precipitation | 2.1-2.3 (W&T) | Lab: Precip Mini Lab 1 and Quiz | Lab/Quiz |
| Feb 5 | 3 | Frequency Analysis | 2.7 12.4-12.5.3 (W& T) | Lab: frequency analysis and flood diagram | lab |
| Feb 12 | 4 | Hydrology Stats and McCabe and Wolock | W&T 1.5-1.6, H&H 3.7, McCabe and Wolock, 2002 | Lab: Precip Lab 2 | lab |
| Feb 19 | 5 | Evaporation and and SPI Index | Chapter 4 (W&T) | Lab: SPI and SPEI | lab |
| Feb 26 | 6 | Groundwater and Drought Indices | 11.1-11.4 (W&T) | Lab: Groundwater Elevation | lab |
| March 4 | 7 | Groundwater and Stationarity and Trends | review week 4 reading | Midterm Lab Quiz | R exam lab |
| March 11 | 8 | Review (March 11) and Midterm (March 13) | review readings | No lab | No lab |
| March 25th (Ramadan starts March 23rd) | 9 | Runoff and Design Storms | 5.1-5.2,5.5-5.6.2 (W&T) | ArcGIS: Watershed Delineation | Lab |
| April 1st (day after Easter) | 10 | Infiltration/Soil Physics | chapter 3 (W&T) | Curve Number Homework and Online Quiz | No lab |
| April 8th | 11 | Hydrograph Separation and Watersheds | 5.3-5.4 (W&T) | ArcGIS Curve Number | lab |
| April 15th | 12 | Hydrograph Separation and Baseflow | review week 9 reading | Hydrograph Separation and Comparison to Runoff | lab |
| April 22nd (Passover begins) | 13 | Streams | chapter 6 and 7(W&T) | BEC Hydrology Report with Maps | lab |

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|---|---|---|---|---|---|
| April 29th | 14 | Streams and Hydrology Overview | chapter 6 and 7(W&T) | Manning's homework/quiz on Streams, Manning, Baseflow | In class quiz/no lab |
| May 6th | 15 | Final Review | | no lab | no lab |
| (Exam will open to all May 10th) | finals week | **Final Exam Wednesday May 15th (2:45-4:45)** | comprehensive | | |

**Complete Assignments**

**All assignments for this course will be submitted electronically through Canvas unless otherwise instructed.** Assignments must be submitted by the given deadline or special permission must be requested from the instructor *before the due date*. Extensions will not be given beyond the next assignment except under extreme circumstances.

**Late Work Policy**

Late work is automatically penalized in Canvas (10% of the assignment per day).

You may **not** submit a lab after feedback has been given. Quiz answers will be released one week after the due date. You may not take a quiz after this date. If you require special consideration due to unique circumstances, you need to contact me in a timely manner.

**Letter Grade Assignment**

| Letter Grade | Percentage |
|---|---|
| A | 93-100% |
| A- | 90-92% |
| B+ | 87-89% |
| B | 83-86% |
| B- | 80-82% |
| C+ | 77-79% |
| C | 73-76% |
| C- | 70-72% |
| D+ | 67-69% |

| | |
|---|---|
| D | 60-66% |
| F | 0-59% |

Assignments

- Precip Mini Lab 1: 10 pts
- Labs: 7 labs, 20 pts each, lowest grade is dropped
- BEC Hydrology Report with Maps, 30 pts
- Online or in-class quizzes: 2-4, 10 pts each (lowest dropped)
- Midterm 100 pts (may include lab exam)
- Final Exam 125 pts (may include lab exam)

**Quizzes**
Quizzes are online, open notes and open "book (online materials are okay)." You may not work with another person. Do not take a quiz while logged into another person's computer. Do not take quizzes side by side with another classmate. Do not involve yourself in behavior that gives the appearance of cheating.

For most students, the best place to take quizzes is on campus because of the fast internet connection. If this is not possible, then choose a location where you will not be disturbed. The quizzes will time out after the allocated time, and this will count as a quiz trial.

**Labs**
You may collaborate with other students currently taking the course, but the work you submit must be your own. For lab credit, projects must be saved in the course folder (s drive) and must reflect your efforts. Folders and projects are checked periodically.

**Professionalism**

It is highly unusual that there is a problem of this nature. If unprofessional behavior is identified in the classroom, online class environment, or via email (or other interactions), and it is not corrected, then it may be followed by removal of your extra credit and/or a deduction of **10 percent** of your final grade. The software we use in this class can be VERY frustrating. Regardless, **combative behavior towards other students or instructors/tutors will result in a further reduction of your final grade by 10-15%. If you have grade questions, contact Dr. Clancy. Dr. Clancy is happy to review your assignment, discuss it with you, and strategize ways to improve.**