To complete this form, please type responses below. You will also need to provide supporting documents by adding them to the bottom of this application form or including them as attachments with your proposal. Email your complete proposal, consisting of the following items, to the Writing Across the Curriculum Coordinator:

1. This W2 Course Review application
2. A syllabus draft that covers the policies, goals, and grade breakdown for the course and includes the schedule to show deadlines and writing instruction. Your syllabus should explain to students why writing is important in this class and what they will learn.
3. Documents that demonstrate the following:
   a. writing assignments (detailed in question #2)
   b. instruction (detailed in question #3)
   c. assessment (detailed in question #4)

Please send all of these items as one single file! (PDF and Word are both fine.)

1. Instructor name:
   Emma Witt

   Instructor program/school:
   ENVL-NAMS

   Course acronym, number, & title:

Writing Assignment   *Specify if the assignment is low*,

PARTS OF THIS APPLICATION:

Draft syllabus

GROUNDWATER HYDROLOGY

ENVL 3435 | Course Guide and Syllabus | Fall 2023 | W2 Application Draft

INSTRUCTOR INFORMATION

Contact Information

Emma Witt, Associate Professor of Environmental Studies

You can call me Emma or Dr. Witt, or Professor. My preferred pronouns are she/her.

Email address: emma.witt@stockton.edu

Phones: 609-626-6854 (office, voicemails go to my email); 609-568-0352 (cell, call or text)

Office Location: AS 120

Office Hours

My fall 2022 office hours are **TBD.** If those times do not work for you, please email or text me, or check my calendar and appointment system on Blackboard to set up a time that will work for you. Course information

COURSE INFORMATION

Objectives

1. Understand the role of groundwater in the hydrologic system.
2. Gain an understanding of aquifer properties and how they influence groundwater flow. Demonstrate this knowledge using a demonstration aimed for an appropriate audience.
3. Learn the principles of groundwea w(s)1.6 (3C BT///6o)11.1 80.005 Tc 0.00ndr y9.629 TT0 1 Th l0.8 3o (d)nd (e)7.4 (e.

2.

-5 (6o)ch.8 0.0-0.7 8inuur   **3**   Gply INk6.6 6rerirRoundwe-5 (r)-6.2 BT8959

Attributes

Q2-This course is offered with a Q2 attribute, meaning you are expected to demonstrate your ability to apply mathematical principles to course materials.

W2-If approved, this course will also be offered with a W2 attribute, so improving as writers is an objective of the course.

ASSIGNMENTS AND GRADING

Problem Sets (30% of total grade; 5% each)

Each unit will have selected problems for you to solve and demonstrate your mastery of the quantitative aspect of that unit. There will be six (6) total problem sets. Each is worth 5% of your total grade. Problem sets will be graded on a correct/incorrect basis. For each problem, you will earn full credit if you arrive at the correct answer and show your work. You will earn half credit if you arrive at the incorrect answer and show no work. No credit will be given if work is not shown.

You may correct and resubmit any problems for which you did not arrive at the correct answer as many times as needed. Full credit will be given for corrected responses.

Groundwater Model Demonstration (25% of total grade)

Working with a group of 2-3 other students, you will use the groundwater models available to make an instructional video with the purpose of explaining an aquifer characteristic to a non-technical audience. This video needs to be narrated, so you will submit a script, demonstration plan, and description of the aquifer property to be shown as part of the assignment, as well as your completed video.

Vernal Pond Study (25% of total grade)

Throughout the semester we will collect data from one of the campus vernal ponds with the aim of increasing our understanding of the role of groundwater in the system. You will compile the data we collect into a technical report that addresses what we found as well as next steps for investigation. This report will require not only field investigations, but also an understanding of the Coastal Plain aquifer system and research from the literature.

Participation and Attendance (20% of total gradn

Grading Scale

94-100	A	70-72	C-
90-93	A-	67-69	D+
87-89	B+	63-66	D
83-86	B	60-62	D-
80-82	B-	0-59	F
77-79	C+	Note that a C is the minimum grade for the W2 to count.	
73-76	C		
73-76	C-		

Note: I'm ending this draft syllabus here, but my real syllabi go on for several more pages about university policies, absences, LAP, etc.

ASSIGNMENT DESCRIPTION: GROUNDWATER MODEL

Objectives

- Demonstrate mastery of an aquifer property (hydraulic conductivity) and the impact of different values of that property on groundwater flow.
- Communicate the essential components of groundwater movement to an audience.
- Practice writing for a non-technical audience and in a manner different from the standard research paper.

Background Information

Models and time lapse photography can be excellent tools to visualize processes we can't see in groundwater because A) groundwater happens underground and B) sometimes it happens very slowly. This video shows the movement of water (or a pollutant, if you prefer) through a saturated medium. The water moves from high head to low head around an obstruction. In the video, the material is fairly uniform, and the hydraulic head is constant. You will make this video, and then you will change something about the aquifer materials you use, and you will do it again. You will develop a complete video (with a script) that could be used in ENVL 1100 to describe how aquifer materials, specifically hydraulic conductivity, impact groundwater movement.

Steps

1. Characterize your aquifer materials. You will complete a sieve analysis and develop sediment size curves for the uniform materials (trial 1), as well as for the coarser or finer materials you use in trial 2. In addition, you will prepare an explanatory tool for understanding these graphs.
2. Make your videos. Using the aquifer models, you will make your two videos, ensuring that you have enough footage for your final product.
3. Complete your Audience and Purpose questions.
4. Write a draft script and submit it.
5. Work on your video editing.
6. Complete video, with voice over using approved script.
7. Show your video to another Groundwater group.
8. Make any edits suggested, submit final video by XXXX.
9. Complete your self-reflection

Assessment

I will offer feedback on your Audience and Purpose questions, draft script, and final product. You will assess your final product and the process in your reflection. You will offer feedback to your classmates via the peer review process (when another group shows your group their video).

ASSIGNMENT DESCRIPTION: VERNAL POND STUDY

Objectives

- Construct a model of a vernal pond on campus based on data we collect.
- Gain experience collecting LiDAR data, processing it, and putting it in ArcGIS.
- Work on writing technical writing skills by developing a report similar to those produced by USGS, NJGS, and other government agencies.

Components:

Your final report must have:

- Model of the vernal pond. This model should be visual, but be accompanied by a detailed methodology.

Considering the audience and writing for different readers

RESOURCES

1.

Audience and Purpose

These are things you should be thinking about when writing.

Who is your audience?

Before reading my paper, my readers will think this way about my topic as it relates to Lake Fred.

But after reading my paper, my readers will think this DIFFERENT way about my about my topic as it relates to Lake Fred

What is my level of expertise relative to my assigned audience?

How do I want to change my reader's view of my topic?

How much does my audience already know about the issue I am addressing?

How much does my audience care about the issue I am addressing?

What constitutes old and new information for my audience?

How resistant is my audience to my topic?
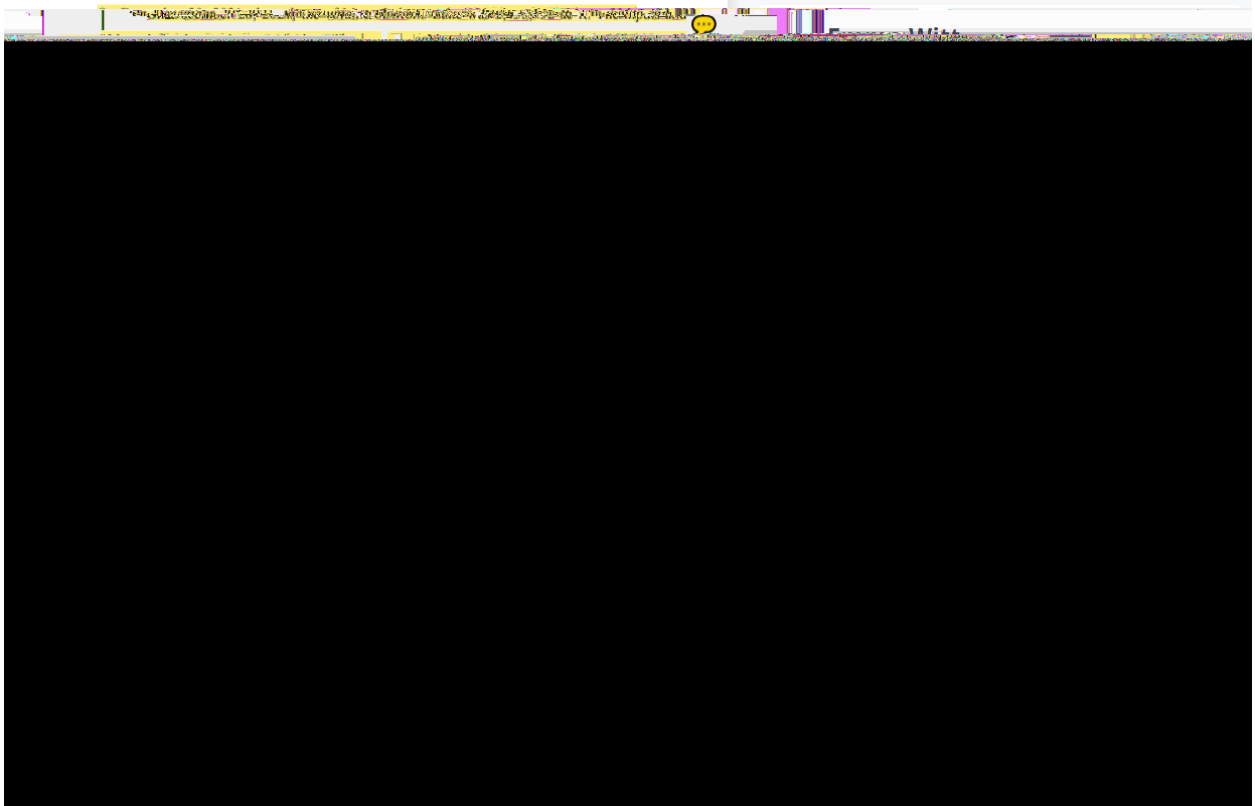
How busy is my audience?

Adapted from Bean, J.C. 2011. Engaging Ideas: The Professor's guide to Integrating Writing, Critical

APPENDIX

From McKenzie, T., Dulai, H., & Chang, J. (2019). Parallels between stream and coastal water quality associated with groundwater discharge.

APPENDIX C: EXAMPLES OF FEEDBACK

Draft assignment feedback

This is a good example of how I grade draft writing assignments. This draft doesn't get a numeric grade, it gets a "check" to denote that the student has accomplished the aim of the assignment, and that the quantitative portion is correct. I offer suggestions for the student to improve the grade to a check-plus, which include working on writing (in this case-using fewer words about the process to be able to add context to the numbers) as well as an invitation to "dig deeper" (in this case, understanding the equilibrium level of the lake is beyond the scope of the original question, so it adds depth to the response).

Sample Rubric

<table>
<tr><th colspan="7">INTRODUCTION</th></tr>
<tr>
<th>Component</th>
<th>Missing/Poor (0-2)</th>
<th>Poor-Fair (2-5)</th>
<th>Fair-Acceptable (5-7)</th>
<th>Acceptable-Good (7-8)</th>
<th>Good-Exceptional (8-9)</th>
<th>Exceptional (10)</th>
</tr>
<tr>
<td>Opening Paragraph</td>
<td>All of the bullet points from fair/acceptable are true.</td>
<td>2 of the bullet points from fair/acceptable are true</td>
<td>

Larger problem not identified
No connection between author's aim and larger problem
Overall purpose (aim) of paper unclear.

</td>
<td>A larger problem is identified. Tenuous connections made between author's aim and this larger problem.</td>
<td>The author's purpose is clear, but relationship to a larger problem is less clear. Slightly muddled relationships.</td>
<td>Captures the author's purpose and relates to a larger problem in a clear, concise, and accurate way. Each sentence is related and all are related to the purpose of the paper.</td>
</tr>
<tr>
<td>Introduction Body Paragraphs</td>
<td>Seems to be a random jumble of disconnected thoughts.</td>
<td>Is a compilation of summaries of papers with minimal connection made among them. Papers are not all relevant to the overall topic of the paper.</td>
<td>Is a compilation of three summaries of papers with minimal connection made among them. Papers are at least all relevant to the overall topic of the paper.</td>
<td>Tried to structure the introduction as more than a list of paper summaries, but wasn't overly successful.</td>
<td>Same as exceptional but maybe the topic sentences are less strong or supp or su1.36 134.28 1.229 T0fmng   e   )</td>
<td></td>
</tr>
</table>

	Missing					
Field Methods	Missing	Has inaccurate or unreadable information	Missing 3-4 bullets from Good-Exceptional list, but has something	Missing 1-2 bullets from Good-Exceptional list.	• Include the name of the logger and the company information • How many measurements were taken? • On which day(s)? • How many per surface type?	Contains all the elements of the good-exceptional, and is so well written as to be exceptional.
Statistical Methods	Missing	Missing all bullets from good/ exceptional list, but has something	Missing 2 of the bullets from Good-Exceptional list.	Missing 1 of the bullets from Good-Exceptional list.	• What test did you use to determine normality? • What were the results of this test? • What test did you use to determine statistical	

RESULTS						
Component	Missing/Poor (0-2)	Poor-Fair (2-5)	Fair-Acceptable (5-7)	Acceptable-Good (7-8)	Good-Exceptional (8-9)	Exceptional (10)
Results Section Narrative	Not present.	No evidence of statistical evaluation.	Has some information about normality (doesn't belong in results) OR Data interpreted incorrectly	Either p-value or statistical test is missing. Data interpreted correctly.	Results are described correctly, and include: • p-value • statistical test used	Results are described correctly, and include: • p-value • statistical test used • Some description beyond p-values (mean, difference in temperature, etc).
Results Section Graph	All of the bullet points in the Acceptable-Good box apply. Or graph is missing or inappropriate.	Three of the points in the Acceptable-Good box apply.	Two of the bullet points in the Acceptable-Good box apply.	• Error bars or letters are missing. • Caption may be weak or contain inaccurate information. • Statistics are included in caption but may be incorrect. • More than one axis label or units are missing or incorrect.	Graph is mostly correct, but mCt br .6 (r)-2.8 (r)-2.9 (08 Tw 0)-3.3 i -0 0 001 Tc 0.001 captisn t, 3y65w 0 -1.217 TDfm⁰078H3 (it)-2.3 (it)-2.ctd8 Tw 0, (it1r)-	

	DISCUSSION/CONCLUSION		
Component	Missing/Poor (0-2)	Poor-Fair (2-5)	Fair-Acceptable (5-

- Large chunks of inappropriate paraphrasing
- No references included

acceptable box