LIMNOLOGY (LAB)– BIO4484/5484
Course syllabus - Fall 2020
Instructor: Dr. Carmen G. Montaña-Schalk

Office: BIO #123 Miller Science Building
Email (preferred contact): montanascg@sfasu.edu
Lab meeting: Thursdays: 1:30-4:20pm - Location: Miller Science Building# 119
Office hours: Monday: 8:00- 11:00 am, Wednesday: 8:00- 10:00 am
By appointment [contact Dr. Montaña by email at montanascg@sfasu.edu and allow at least 24 hours in advance to schedule times other than those listed in the office hours]

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COVID-19 MASK POLICY
Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class. All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.
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Lab: No Text Required – Handouts will be provided

Limnology Laboratory: is a field laboratory course in aquatic ecology techniques. The mandatory laboratory portion of this class will reinforce, using hands-on field and laboratory experience sampling aquatic systems, measuring and interpreting important limnological variables, and identifying aquatic organisms. Students are expected to keep a field/lab manual in which you will describe projects and collect observations/data and provide synoptic analyses and conclusions. Although everyone will participate in conducting all of the field/lab projects, you will also work in groups on individually assigned projects which you will analyze more fully and you will prepare a written report. Your group will also be responsible to put together a powerpoint presentation of the project which will be presented to the class in a ‘mini-symposium’. More details will be provided at the beginning of the semester.

Specifics for labs will be presented in the lab syllabus.
[This course requires outside activities in inland aquatic ecosystems (lakes, rivers, streams, ponds). When outdoor, in the field, each student should dress appropriately, i.e., no sandals or flip-flops. Rather, each student should purchase an inexpensive pair waders or hip waders. Hat, sunscreen, and light long pants and long-sleeve shirts are ideal for fieldwork. When being outdoor, we are exposed to wild animals including snakes, ticks and chiggers, so proper attire is necessary]

OBJECTIVES
• The students will design experiment that deal with factors that influences freshwater communities.
• The students will work as member of a research team
• The students will use the scientific method to develop a scientific project
• The students will perform standard methods of collecting physico-chemical data, habitat data, biotic data
• The students will key out different taxa of organisms as they are important within the context of the research project selected for each student
• The students will collect data, organize it and write a scientific paper and present results via Power Point presentations.

Policy on form of writing papers: I expect you to use a word processor in producing all paper for this lab and lecture. Indeed, I assume that you will use Word. Nevertheless, I will not read or acknowledge any paper that is not type or processed with a word processor. In addition, I demand proper spelling, syntax and grammar in all written work. Also, quotes are never allowed in scientific writing for proper writing style and formats in scientific papers consult Aquatic Ecology(https://www.springer.com/journal/10452/submission-
Field trips: Students must be willing to attend the mandatory field trip days and be comfortable with going outside in all types of weather. Field trips will include sampling sites along a longitudinal gradient in La Nana Creek (headwater, middle reaches, and lower reaches outside the loop HWY-59), streams that are tributaries of the Angelina and Neches River, and lakes. Field-based classes will expose student to examine different habitats and learn sampling and equipment procedures. Sampling includes methods of biological, chemical and physical assessment such as field surveys of algal, macrophyte, water chemistry, fish and benthic invertebrate diversity. A leak pack decomposition experiment will be assessed as well. For each field trip, students are required to take very detailed information about the habitats, biotic and abiotic conditions. The professor will provide specific data sheets for aquatic ecosystem bioassessment. Note that there is one field trip on a weekend that is part of the lab session and thus mandatory. Also, for most field trips, we will try to be back to SFA by 4:30 pm, some of the field projects may keep us out past that time, so please plan accordingly.

ATTENDANCE is mandatory in lectures AND labs, and you will benefit greatly by attending. I will discuss information that is not in the PowerPoint slides and you will be responsible for knowing on the exams. See below for missed assignments policy. An abbreviate version of the lectures will be posted on D2L.

Lab/field Notebook
Students are required to keep a detailed journal of lab and field activities. The grade will be based on the completeness and quality of the notebook. In addition, students will be required to record detailed field notes for the planned field trips, over the course of the semester. Be detailed enough in your daily entries that you could open the notebook in 20 years and recreate the outing completely and come up with a list of observations (plants, inverts, water quality, etc., etc.) made at a given place.

Semester project/ presentation
Students will work on a specific Stream Ecology project assigned by Dr. Montana. Students will research and write a short paper in a scientific format. The paper must be written in the style of one of the following scientific journal formats, and strictly adhere to author guidelines:
- Freshwater Science: https://www.journals.uchicago.edu/journals/fws/instruct?mobileUi=0&#special

I strongly encourage students to come see me to discuss the group projects before they begin their research for guidance.

The project grade will be evaluated on the following factors: the quality of the paper being presented, 2) the quality of the PP presentation, 3) the quality of the student’s individual presentation of their oral presentation, 4) student evaluation by their peers. Instructions for each assignment, presentation criteria, and peer evaluation criteria will be discussed at a later date, early in the semester.

Students will prepare a presentation that will be presented in power point format at the end of the semester. Students will have ~15-20 minutes to highlight the findings and defend their project.
**Tentative Lab Topics- Fall 2020**

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<tr>
<th>Weeks</th>
<th>Lab Topics</th>
<th>Readings/Notes</th>
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<tbody>
<tr>
<td>8/27</td>
<td>Lab Introduction, leaf packs preparation</td>
<td>Readings about Leaf pack will be provided</td>
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<td>Lab Project discussion</td>
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<td>9/3</td>
<td>Field trip 1**, <strong>Bernaldo Creek</strong> SFA Experimental Forest. Deploy Leaf pack experiments &amp; water quality/Habitat data</td>
<td>Dave Peterson will join the Field trip</td>
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<td>9/10</td>
<td>Field trip 2**, <strong>La Nana Creek</strong> (3 sites along a gradient) Deploy Leaf pack experiments &amp; water quality/Habitat data</td>
<td>Alternative site, <strong>La Banita Creek</strong></td>
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<td>Saturday Trip (9/12) 8:am – 4:pm Field trip 3**, <strong>Ratcliff Lake, Lee Creek</strong> (upstream and downstream the Lake).</td>
<td>Dave Peterson will join the Field trip</td>
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<td>9/17</td>
<td>Field trip 4**, **Ponds/Creek Davy Crockett National Forest 12pm - 6 pm (tentative times) (aquatic macrophyte, algae, water quality, invertebrate surveys)</td>
<td>Dave Peterson will join the Field trip</td>
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<td>9/24</td>
<td><strong>Team working on Bernaldo Creek</strong> go out to collect leaf packs/ &amp; water quality/Habitat data/macroinvertebrate collection</td>
<td>Lab teams_ Project discussion/ updates on project objectives and methods /data collection</td>
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<td>10/1</td>
<td><strong>Team working on La Nana Creek</strong> (site 1 upstream) go out to collect leaf packs/ &amp; water quality/Habitat data/macroinvertebrate collection</td>
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<td>10/8</td>
<td><strong>Team working on La Nana Creek</strong> (site 2 downstream) go out to collect leaf packs/ &amp; water quality/Habitat data/macroinvertebrate collection</td>
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<td>10/15</td>
<td><strong>Team working on La Nana Creek</strong> (site 3 downstream) go out to collect leaf packs/ &amp; water quality/Habitat data/macroinvertebrate collection</td>
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<td>10/22</td>
<td>Lab work _ Team Bernaldo Creek. Identification of Macro invertebrate and Zooplankton from leaf packs</td>
<td>Macroinvertebrates and zooplankton IDs</td>
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<td>10/29</td>
<td>Lab work- Team La Nana Creek (Site 2-3 downstream). Identification of Macro invertebrate and Zooplankton from leaf packs</td>
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<td>11/12</td>
<td>Lab work- Creek. Identification of Macro invertebrate and Zooplankton from leaf packs</td>
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<td>11/19</td>
<td>Data analysis/summary of data/write up reports</td>
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<td>11/23-11/27</td>
<td><strong>Thanksgiving break</strong></td>
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<td>12/3</td>
<td>Class presentation</td>
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CLASS POLICIES

1. **D2L and Email:** I will communicate with the class using email via D2L. Thus, I expect you to check your email regularly for information regarding the class. Missing an email announcement is not an excuse for missing an assignment. Moreover, I will post general information about assignments, tests, and labs on D2L. It is your responsibility to obtain these documents.

2. **Communicating with your professor:** Email (montanascg@sfasu.edu) will be the primary means of communication for the course. Any correspondence to your professor should follow the following format: subject line: BIO4484/5484, to whom (Dr./Professor Montana), statement, thank you, and student’s name. The professor has the right of not answering emails to those students that fail to follow this format.

   **Note:** Do not contact me via D2L. The main method to communicate to me is via email: (montanascg@sfasu.edu).

3. **Completing assignments:** It is your responsibility to complete assignments independently and in a timely manner. I will not accept any late assignments (i.e., you will receive a grade of zero for any assignment not submitted on time).

4. **Attendance:** Attendance in this class and laboratory is mandatory, expected, and often is directly correlated with grade. Most examination questions come from lectures and experiences show that those students who attend class consistently obtain the highest grade. Attendance will be recorded at the beginning of each class period.

5. **Grades cannot be discussed via e-mail at any time** due to federal law. I will speak to you in person instead during my office hours. DO NOT involve a third-party who is not affiliated in an official capacity with SFASU (e.g., friend, roommate) in any matters pertaining to your enrollment in this course. Your instructor is legally prohibited from discussing most course/grade-related issues with third parties according to the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99).

6. **Plagiarism policy:** A first offence will be penalized with a zero that cannot be dropped. A second offence will be penalized with an F and/or the option to drop the course. Please pay particular attention to this policy as you will be working on class projects for the semester. Be sure to review the university’s academic integrity policy which can be found at http://www.sfasu.edu/policies/4.1-student-academic-dishonesty.pdf

   Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit.

7. **Students with Disabilities.** To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004/468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

8. **Absence and Make-up Policy:** Any points for assignments, participation, or exams missed as a result of an absence cannot be made-up. The only exception for an in-class exam is if the absence is planned and approved by the instructor at least 15 days prior to the date of absence or upon receipt of a documented medical excuse or an excuse provided by the office of the Vice President for Academic Affairs. In this case an alternative exam will be given. A student who wishes to make up an exam will have 7 calendar days after they return. After 7 calendar days the student will receive a “0” for that exam.
CLASSROOM CONDUCT— All students in the class must treat others with civility and respect and conduct themselves during class sessions in a way that does not unreasonably interfere with the opportunity of other students to learn.

9. Disruptive behavior policy: A student may be asked to leave the classroom for any behavior I find disruptive. A first offence will not be penalized; however, further offences may be penalized with reduction in a student’s final grade as follows: 5% for a second offence, 10% for a third offence, etc.

Dr. Montaña does NOT necessarily give you a warning or make an announcement that you are disrupting class. Instead, points will simply be deducted in the grade book. Students are free to inquire at any time whether they have had points deducted during office hours.

Tardiness: Tardiness to lecture will not be tolerated; it disrupts the lesson and the concentration of fellow students. Reasonable accommodations will be made in cases of emergency situations if documentation is provided. It is the student’s responsibility to provide the instructor with documentation of emergencies.

Sleeping: Sleeping during class can be distracting to other students and the instructor. If a student is so tired that they cannot stay awake for a lecture, as boring as it may be, the student should not be in class.

Cell Phones: Cell phones must be turned off during lecture. If a cell phone goes off, the student may be asked to leave lecture for that day. In cases of family health (pregnant spouse, hospitalized family member, etc.), the student must inform the instructor of the situation BEFORE class begins. In these cases, the cell phone ringer must remain off (i.e., phone set to vibrate).

Leaving Class: Leaving class is disruptive to other students who are trying to pay attention. Leaving the class for any reason will count against you. This includes leaving during exams to use the restroom. Hence, be sure to use the restroom before coming to class. If a student knows they will need to leave class early, notify the instructor well ahead of time. Points will not be deducted if the student has a legitimate excuse for leaving early.

Talking/Disruptive Behaviors: Dr. Montana highly encourages students to ask questions or make relevant comments during a lecture. However, talking to a neighbor or other disruptive behavior will not be tolerated because, again, it disrupts the learning environment of other students.

Laptop computers: Laptop computers are not allowed in lecture. In my past experience, too many students have used them for surfing the internet or working on other projects during lecture, which distracts other students.

10. Withheld Grades Semester Grades Policy (A-54): Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

If you have difficulties or complaints related to this course, your first action usually should be to discuss them with Dr. Montaña.