Marine Biology
(BIOL 3317)
Spring 2024

General information
Instructor
Dr. Jason Bruck
Office: Miller Science Building, 112
Email: jason.bruck@sfasu.edu
Office hours: Wednesday/Friday 12:00-2:30
Phone: (936) 468-2267
Department: Biology
Prerequisite: None

Meeting times and location
Lecture: Monday, Wednesday and Friday 8:00 am to 8:50.
Location: Miller Science 225.

Textbook
- No Textbook will be required. But readings will be assigned during the semester. Please pay attention to announcements in class and check D2L regularly.

Readings
Required materials will be posted on D2L.

D2L/Brightspace
Regularly check D2L for updates on the syllabus and lecture schedule. Particularly the lecture schedule may change depending on the progress throughout the semester. D2L will also be used for some homework assignments and quizzes, and to provide further reading as necessary. I strongly encourage you to take detailed notes during class (potential summary slides will work as content guideposts, but not substitutes for class attendance, both in person and virtual).

Attendance and grading
It is imperative that you attend or view every class. Lectures will often cover primary research and it will be essentially for you to attend lecture for you to know what I am prioritizing. Both lecture and reading content will be examined. The final grade will be based on performance on homework, in-class activities, the YouTube project and exams. The second and final exam will be cumulative. Different assignments may be associated with different numbers of points. The final points in each category will be weighed as below. Your grade in the course depends solely on performance on
the graded items described; **there will probably be no opportunities to improve your grade by doing additional work.** Per SFA policy 5.4, a 3-credit hour face-to-face course in the fall or spring term should approximate 150 minutes of classroom time/direct instruction and at least 6 hours of out-of-class work per week for at least fifteen weeks. The majority of that time outside of class should be spent reading the materials posted to D2L, doing assignments, your YouTube project and quizzes.

**Weighing:**

<table>
<thead>
<tr>
<th>Assessment category</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes/HW/Classwork</td>
<td>100</td>
</tr>
<tr>
<td>YouTube Project</td>
<td>100</td>
</tr>
<tr>
<td>Exam I</td>
<td>100</td>
</tr>
<tr>
<td>Exam II</td>
<td>100</td>
</tr>
<tr>
<td>Final exam</td>
<td>100</td>
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**Grading scale:**

<table>
<thead>
<tr>
<th>Final points</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>450-500</td>
<td>A</td>
</tr>
<tr>
<td>400-449</td>
<td>B</td>
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<tr>
<td>350-399</td>
<td>C</td>
</tr>
<tr>
<td>300-349</td>
<td>D</td>
</tr>
<tr>
<td>0-299</td>
<td>F</td>
</tr>
</tbody>
</table>

Exams will be multiple-choice format, designed to assess your understanding of the material discussed in lecture. Exams are open book and will be conducted through Brightspace.

**Exam Policy:**

There will be NO MAKE-UP OR EARLY EXAMS given for Exams. If you miss one of these exams for ANY justified reason I may count your final as the missing grade at my discretion. Note that this does not apply to the Final Exam – this exam cannot be missed. Everyone must take the Final Exam. **You will have 24 hours to complete exams on D2L and exams always open at 9:00 am on test day and close at 9:00 am the next day.**

**Quizzes/HW/Classwork**

Homework and quizzes will be solely announced during lectures (in-person and virtual). If you miss a lecture period, **refer to your peers** to learn about pending homework assignments or quizzes. For homework and quizzes, I will drop your lowest score at the end of the semester to calculate your average percentage in the homework/quiz/classwork category. If you miss an assignment for whatever reason, consider that taken care of in the dropped score. If you miss more than one assignment,
a zero will be scored for each additional missed assignment. Quizzes/HW/Classwork that is turned in late will not be graded and receive zero points.

**YouTube Presentations**

You will work in a group of no more than 4 people to present a YouTube video on one member species from a group of organisms (see Tentative Schedule and YouTube teams to find out who you work with and when you present on which group). As a group you will have 15 (+/- 5) minutes to present the material, which will allow for a deep dive into a particular species. At the end you will give your fellow students a short Brightspace quiz to see how well they learned what was in your video. Part of your point assessment for this project will be based on the performance of your classmates on this quiz. More information will be given in class or on Brightspace as the semester progresses.

**YouTube Project Teams**

Team 1:
- Blacksher, Rylee, blacksher
- Chanmysay, Aaron, chanmysaaa
- Jansen, Nicholas, jansennj
- Rivera, Sasha, riverasm3
- Stewart, Michael, stewartjm3

Team 2:
- Crandall, Matthew, crandallmw
- Fryar, Daniel, fryardb
- Lederman, Hannah, ledermanhr
- Stephens, Tyler, stephenstc
- Beeksma, Megan E., beeksmame

Team 3:
- Anderson, Mikayla, andersonmm2
- Ashley, Brenna, ashleybr
- Horner, Oliver, hornerob
- Peters, Nicholas, petersnk
- Turner, Alexi L., turneral1

Team 4:
- Garza, Alyssa, garzaam14
- Langley, Chandler, langleycm1
- Valli, Isabella, valliil
- Whitesel, Travis, whiteseltw
- Whidden, Quinn D., whiddenqd

**Important Dates, Course Policies Established by SFA:**
Please see the SFA website for questions regarding add, drop, & withdraw dates, final exam overloads, where to go for help, etc.

**Academic integrity**

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.
Academic Integrity Policy (4-106)

The Code of Student Conduct and Academic Integrity (https://www.sfasu.edu/docs/policies/10.4.pdf) outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

Withheld Grades Semester Grades Policy (2-206)

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 coursework 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 to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.

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 promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Wellness and Well-Being
SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanservices/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

- Health Services
- Counseling Services
- Student Outreach and Support
- Food Pantry
• Wellness Coaching
• Alcohol and Other Drug Education

www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:
• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255)
• johCrisis Text Line: Text HELLO to 741-741

Credit Hour Justification/Mode of Teaching:
The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

As such, as this is a three-credit course, we will meet each week for three 50 min lecture/discussion meetings. You will need to do work (reading) out of class to be successful in discussions.

Program Learning Outcomes:
Each of the Course Objectives and Student Learning Outcomes listed below address the Biology Department Program Learning Outcome # 1: Demonstrate a good knowledge base in biological concepts and be able to integrate knowledge with critical thinking skills to become problem solvers. Knowledge base will include: levels of complexity (molecular/cellular through population/communities/ecosystems), biological principles and processes. Students who email me the name of their favorite marine animal will get three points towards a test.

Course Objectives and Student Learning Outcomes
My role as instructor is to facilitate your learning about marine biology, conservation, evolution, physiology, anatomy, ecology and behavior. Learning is not a passive activity in which you simply absorb and repeat back facts. Rather, learning
requires you to take an active role. This means that in our class meetings, I will not just “lecture”, but also actively involve each of you in the learning process. I will guide you as you engage in activities that reflect how scientists build knowledge, such as working as part of collaborative studies, developing and testing hypotheses, constructing and evaluating models, interpreting evidence, connecting facts to theory, reasoning about problems and communicating your understanding in multiple forms. My goal is that, by the end of this course, you will have:

- **Applied the scientific method to approach new problems and questions.**
- **Become familiar with influential researchers in the field of marine biology through reading and live teleconferences.**
- **Critically assessed information, especially in the form of data (both published and raw).**
- **Effectively communicated original research in writing.**
- **Gained an appreciation for the evolutionary history and consequent adaptations that make marine animals and plants unique when compared to terrestrial counterparts.**
- **An understanding of the rich history of the science of marine conservation as well as current efforts to preserve these species.**
- **Summarized the basic interactions of marine species with their environment to fully appreciate the value of marine organisms to ocean ecology.**

To achieve these goals, I ask that you to:

- **Actively participate in the class meetings.**
- **Display curiosity and act in an ethical manner.**
- **Effectively work cooperatively in class and for assigned classwork (when group work is required).**
- **Develop your own learning goals.**

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**Tentative Semester Schedule (dates and topics subject to change)**

We meet in person in Miller 225 unless otherwise notified by SFA E-mail (Check your email for notices about special classes).

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic/Activity</th>
<th>Corresponding Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 19</td>
<td>Introduction</td>
<td>No Readings</td>
</tr>
<tr>
<td>Jan. 22</td>
<td>Science &amp; non-science</td>
<td></td>
</tr>
<tr>
<td>Jan. 24</td>
<td>The dawn of life</td>
<td>D2L Readings</td>
</tr>
<tr>
<td>Jan. 26</td>
<td>The dawn of life</td>
<td></td>
</tr>
<tr>
<td>Jan. 29</td>
<td>Marine Invertebrates</td>
<td></td>
</tr>
<tr>
<td>Jan. 31</td>
<td>Marine Invertebrates</td>
<td>D2L readings</td>
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<td>Feb. 2</td>
<td>Marine Invertebrates</td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Subject</td>
<td>Notes</td>
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<tr>
<td>Feb.  5</td>
<td>Marine Invertebrates</td>
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</tr>
<tr>
<td>Feb.  7</td>
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<td>D2L Readings</td>
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<td>Feb.  9</td>
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<td>Feb. 14</td>
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<td>D2L readings</td>
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<td>Feb. 16</td>
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<tr>
<td>Feb. 19</td>
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<td>Feb. 23</td>
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<td>Feb. 26</td>
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<tr>
<td>Feb. 28</td>
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<td>D2L readings</td>
</tr>
<tr>
<td>Mar.  1</td>
<td>Marine Invertebrates</td>
<td>(TEAM 1 Present)</td>
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<tr>
<td>Mar.  4</td>
<td>Marine Invertebrates</td>
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</tr>
<tr>
<td>Mar.  6</td>
<td>Marine Invertebrates</td>
<td>D2L readings</td>
</tr>
<tr>
<td>Mar.  8</td>
<td>Marine Invertebrates</td>
<td>Exam I</td>
</tr>
<tr>
<td>Mar. 11</td>
<td>SPRING BREAK</td>
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<td>Mar. 13</td>
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<td>Mar. 15</td>
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<tr>
<td>Mar. 18</td>
<td>Marine fish</td>
<td>D2L Readings</td>
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<td>Mar. 20</td>
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<td>Mar. 22</td>
<td>Marine fish (TEAM 4 present)</td>
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<td>D2L readings</td>
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<td>Mar. 29</td>
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<tr>
<td>Apr.  1</td>
<td>Marine fish</td>
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<tr>
<td>Apr.  3</td>
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<tr>
<td>Apr.  8</td>
<td>Marine fish</td>
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<tr>
<td>Apr. 10</td>
<td>Marine Reptiles (TEAM 3 Present)</td>
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<tr>
<td>Apr. 12</td>
<td>Marine Reptiles (TEAM 3 Present)</td>
<td>EXAM 2</td>
</tr>
<tr>
<td>Apr. 15</td>
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<td>D2L readings</td>
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<tr>
<td>Apr. 17</td>
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<tr>
<td>Apr. 19</td>
<td>Marine Reptiles</td>
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<tr>
<td>Apr. 22</td>
<td>Marine Mammals</td>
<td>D2L readings</td>
</tr>
<tr>
<td>Apr. 24</td>
<td>Marine Mammals (TEAM 2 Present)</td>
<td></td>
</tr>
</tbody>
</table>
Apr. 26    Marine Mammals

Apr. 29    Marine Mammals    D2L readings

May 1      A loud, rope filled ocean. Current topics in marine conservation

May 3      The ethics of aquariums and captivity

May 6      FINAL on D2L

About your professor:
Dr. Bruck was born on Long Island and mostly raised in Syracuse, NY (with stints in Ohio and Texas). He received his B.S. in Biology/Psychology from Long Island University (Southampton, NY) in 2002. After working for a year as an Adjunct Professor at LIU, he went to The University of Chicago for his M.A. and Ph.D. in Comparative Human Development specializing in Behavioral Biology (with a dissertation focused on determining the limits of dolphin memory), earning those degrees in 2007 and 2013 respectively. He then spent time serving as an educator in an inner-city public-school system. In 2014 Dr. Bruck was hired as a Visiting Assistant Professor in the Department of Integrative Biology at OK State. After one year teaching in Oklahoma Dr. Bruck received a two-year Marie Curie Fellowship to study dolphins at the Sea Mammal Research Unit of the University of St. Andrews in Scotland (Est. 1410). In 2017 Dr. Bruck took a position as a Teaching Assistant Professor back at OK State where he was awarded a Woodrow Wilson Fellowship for Excellence in Teaching in 2019. In 2021 he was awarded the 4-year section Excellence in Biology Instruction Award from the National Association of Biology Teachers and in 2022 he was awarded the Outstanding Undergraduate Science Teacher Award from the Society of College Science Teachers. He joined SFA in 2020 as an Assistant Professor and is happy to be in TX. Dr. Bruck is married and has one daughter in Hudson public schools.


https://www.nationalgeographic.com/animals/article/dolphins-use-their-sense-of-taste-to-identify-friends

https://theconversation.com/dolphins-use-signature-whistles-to-represent-other-dolphins-similarly-to-how-humans-use-names-188332