

LECTURE SYLLABUS
BIOL 5307 Biogeography Spring 2022

Instructor: Dr. Thornton R. Larson
Lectures: TR 1230-145 WSB 107

Office Hours: MWF 930-1030; T 2-4
Office Phone:
Email: Thornton.Larson@sulross.edu
Office: WSB 221

Course Description:

Biogeography studies the past and present distribution of plants and animals; their origin, dispersal, and extinction in time and place. This course will combine traditional lectures and discussions to immerse graduate students in this fascinating field. We will cover traditional biogeographic comparative methods as well as what modern phylogeographic methods allow.

Recommended Books/Materials:

1. *Biogeography 4th ed.*, Lomolino et al.
2. Weekly handouts (journal articles) posted on blackboard for discussion

Exams and Grading:

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|---|-------------------|
| 3 lecture exams (100 pts ea) | 300 |
| Weekly paper outlines (10 pts ea) | 100 |
| Research project | 100 |
| Total Credit | 500 points |
| A 90 – 100% B 80 – 89% C 70 – 79% D 60 – 69% F <60% | |

Attendance: Mandatory. You are graduate students, and I expect you to act like it. No roll will be called, but this course is sized to where I will recognize when someone is not present. **I am allowed to drop you from my class** if you miss **more than six times** (that accounts for 2 full weeks of lecture). I do not wish to hear excuses for missing class, and do not want to hear about it every time you are gone. Absences are excused only if you have a documented, university approved excuse (hospitalization, funeral, etc.) **DO NOT MISS EXAMS** unless you have a documented, university-approved excuse. If you do not inform me of your approved absence before the exam it will be a **ZERO**.

Course Objectives: At the end of the semester, students will:

1. Understand basic biogeographic principles.
2. Critically examine scientific papers.
3. Conceive of a scientific question and hypothesis regarding biogeography.
4. Build proficiency at literature searches and database building.
5. Test some basic hypotheses about biogeographic patterns.

Student Learning Outcomes (SLOs) for Biology (graduate students):

1. Understanding and implementation of scientific methodology.
2. Utilization of field techniques toward addressing scientific questions.
3. Be able to utilize statistics toward the analysis of data within the discipline.
4. Be able to effectively disseminate scientific findings using both written and oral communication.

Marketable Skills

1. Ability to organize, analyze, and interpret data.
2. Proficiency in using presentation software.
3. Experience in managing time and meeting deadlines.
4. Ability to speak effectively and write concisely about scientific topics.
5. Experience in the development of professional email correspondence.

SRSU Library Services

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

SRSU Disability Services:

ADA (Americans with Disabilities Act) Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Students seeking accessibility/accommodations services must contact Rebecca Greathouse Wren, LPC-S, SRSU's Accessibility Services Coordinator at 432-837-8203 (please leave a message and we'll get back to you as soon as we can during working hours), or email rebecca.wren@sulross.edu. Our office is located on the first floor of Ferguson Hall (Suite 112), and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832

ACADEMIC HONESTY: The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of their classroom. The University may initiate disciplinary proceeding against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. "Cheating" includes 1. Copying from another student's test paper, laboratory report, other report, or computer files, data, listings, and/or programs, or allowing another student to copy from same. 2. Using, during a test, materials not authorized by the person giving the test. 3. Collaborating, without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of an

non-administered test. 5. Substituting for another student; permitting any other person, or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit. 6. Bribing another person to obtain a non-administered test or information about a non-administered test. 7. Purchasing, or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of a rough and/or final version of an assignment by a professional typist. 8. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea in one's own written work offered for credit. 9. "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit. 10. "Abuse of resource materials" means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials. 11. "Academic work" means the preparation of an essay dissertation, thesis, report, problem, assignment, or other project that the student submits as a course requirement or for a grade. 12. "Falsification of Data" means the representation, claim, or use of research, data, statistics, records, files, results, or information that is falsified, fabricated, fraudulently altered, or otherwise misappropriated or misrepresented. All academic dishonesty cases may be first considered and reviewed by the faculty member. If the faculty member believes that an academic penalty is necessary, he/she may assign a penalty but must notify the student of his/her right to appeal to the department chair, the dean and eventually, to the Provost and Vice President for Academic and Student Affairs before imposition of the penalty. At each step in the process, the student shall be entitled to written notice of the offence and/or of the administrative decision, an opportunity to respond, and an impartial disposition as to the merits of his/her case. The decision of the Provost and Vice President for Academic and Student Affairs shall be final.

Tentative Lecture Schedule

| Date | Topic |
|-------------|-------------------------------------|
| 1/11 | Syllabus and Intro to Biogeography |
| 1/13 | Discussion (How they will run) |
| 1/18 | The Geographic Template (ch. 3) |
| 1/20 | Discussion |
| 1/25 | Distribution of Species (ch. 4) |
| 1/27 | Discussion |
| 2/1 | Distribution of Communities (ch. 5) |
| 2/3 | Discussion |
| 2/8 | Dispersal and Immigration (ch. 6) |
| 2/10 | Discussion |
| 2/15 | Speciation and Extinction (ch. 7) |

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| 2/17 | Exam 1 |
| 2/22 | The Changing Earth (ch. 8) |
| 2/24 | Discussion |
| 3/1 | Glaciation and Biogeographic Dynamics of the Pleistocene (ch. 9) |
| 3/3 | Discussion |
| 3/8 | SPRING BREAK |
| 3/10 | |
| 3/15 | The Geography of Diversification (ch. 10) |
| 3/17 | Discussion |
| 3/22 | Reconstructing the History of Lineages (ch. 11) |
| 3/24 | Discussion |
| 3/29 | Reconstructing the History of Biotas (ch. 12) |
| 3/31 | Exam 2 |
| 4/5 | Island Biogeography (ch. 13, 14) |
| 4/7 | Discussion |
| 4/12 | Ecological Geography of Continental and Oceanic Biotas (ch. 15) |
| 4/14 | Discussion |
| 4/19 | Conservation Biogeography and the Dynamic Geography of Humanity (ch. 16) |
| 4/21 | Discussion |
| 4/26 | Presentations |
| 4/28 | Dead Day |
| 5/4 | Exam 3 (10:15 AM – 12:15 PM) |