

**Syllabus: GEOS F3170**  
**PALEONTOLOGICAL RESEARCH AND LABORATORY METHODS**  
**2 Credits – Oral Intensive**

**Professor:** Patrick S. Druckenmiller

**Course objectives:** The primary objective of this course is to gain a theoretical framework and practical experience in paleontological research methods. Additionally, you will learn effective techniques for communicating the results of these methods to others. The major objectives of this course will be to: 1) understand and select an appropriate method for investig

**Support Services:** All efforts will be made by the instructor to assist students seeking support in this class, either during regular office hours or by appointment. If needed, the instructor will assist the student in arranging additional support, including ASUAF tutoring services (474-7355), or through other instructors on campus.

**Disabilities Services:** The Office of Disability Services implements the Americans with Disabilities Act (ADA) and ensures that UAF students have equal access to the campus and course materials. I will work with the Office of Disability Services (474-5655) to provide reasonable accommodation to students with disabilities. Please let me know at the start of the course if accommodations should be provided.

### LECTURE AND LAB SCHEDULE

Date	Topic
1/25 1/26	Lect. 1: Introduction and goals; paleontology as a discipline <b>Lab 1: Fossil preparation I</b>
2/1 2/2	Lect. 2: Conservation methods in paleontology <b>Lab 2: Fossil preparation II</b>
2/8 2/9	Lect. 3: Preparing scientific figures/illustrations <b>Lab 3: Photographing microfossils in the field and lab</b>
2/15 2/16	Lect. 4: Elements of an oral presentation I <b>Lab 4: Light microscopy and microphotography</b>
2/22 2/23	Lect. 5: Elements of an oral presentation II <b>Lab 5: The art of scientific illustration</b>
2/29 3/1	Lect. 6: Scientific descriptions; Codes of Nomenclature <b>Lab 6: Fossil identification and description</b>
3/7 3/8	Lect. 7: Museum resources I: Curation <b>Lab 7: Oral presentations I: professional meeting format (with video)</b>
3/12-16	NO CLASSES – SPRING BREAK
3/21 3/22	Lect. 8: Museum resources II: Paleontological databases; theory and practice <b>Lab 8: ARCTOS primer: using an online database to enter and retrieve data</b>
3/28 3/29	Lect. 9: Fundamentals of preparing a poster <b>Lab 9: Preparing a poster</b>
4/4 4/5	Lect. 10: Methods for imaging fossils – SEM, CT, and other acronyms <b>Lab 10: Manipulating and interpreting CT images</b>
4/11 4/12	Lect. 11: Isotopic analysis in paleontology <b>Lab 11: Exercise at UAF Advanced Instrumentation Lab</b>

4/18 Lect. 12: Recording data in the field  
4/19 **Lab 12: Collecting field data; field trip to the Permafrost Tunnel**

4/25 Lect. 13: Other methods and future trends in paleontology  
4/26 **Lab 13: Oral presentations II: classroom format**

5/2 Lect. 14: Fossils as a public resource; legality and philosophy  
5/3 **Lab 14: Oral presentations II: classroom format**

5/9-12 **FINAL EXAMS**