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| **Deep Time Biology Lab**  Department of Earth Sciences  Montana State University  Bozeman, Montana, 59717  [organ@montana.edu](mailto:organ@montana.edu) | <https://chrisorgan.github.io> |

**Orientation Guide**

**Welcome to the Deep Time Biology Lab!**

As a new undergraduate or graduate student, you are embarking on an exciting journey that will develop your scientific skills, ignite your curiosity, and contribute to humanity’s understanding of reality. It’s a big deal! To help you transition into our lab culture and workflows, we've put together this orientation guide and checklist.

The transition from coursework to independent research is challenging. It requires you to think and work very differently from a test-taking student. You will need to be dependable, independent, creative, and disciplined – you alone are responsible for completing your project. You will also need perseverance in spades because research is an act of creation where the work can be both intimidating and tedious, where the “right answer” is never known.

Step one is to familiarize yourself with our lab's mission and research goals: We are devoted to understanding the mechanisms and processes of biological evolution by integrating data from various fields. Ensure that you are aware of our current research topics and their relevance to broader scientific and societal trends. Within this context, think about your project and role. What does success look like, and what must you do to succeed? What role do you play in the lab, the department, the university, and our field of evolutionary biology? If you're unclear about these questions, let’s talk – my door is always open.

**Checklist for New Team Members**

Montana State University

1. Get NetID & email address (email address is generated after registering for classes)

<https://www3.montana.edu/netidclaim/>

1. Get CatCard:

<https://www.montana.edu/catcard/students.html#get>

1. New graduate student orientation:

<https://www.montana.edu/gradschool/admissions/orientation.html>

1. Review the Department of Earth Sciences Graduate Handbook:

<https://www.montana.edu/earthsciences/graduate-program/handbook.html>

Deep Time Biology Lab

1. Obtain permission to access the lab drive where all our work is stored.
2. Add the lab calendar to your own to see lab events and deadlines:

[tc02afndi7a9143ph7vq4jv64k@group.calendar.google.com](mailto:tc02afndi7a9143ph7vq4jv64k@group.calendar.google.com)

1. Connect to the Earth Science departmental printer:
   * Cannon Image Runner C5560i

Copier Name: ESCI\_TRAP226\_CN5560.msu.montana.edu

From copier (user, pin): ESCI, 2580

From computer (user, pin): 2580, 2580

1. Read and agree to follow the contents of the Lab Expectations document.
2. Read the Research Quality Assurance.
3. Develop your initial individualized training plan and review it with the PI.
4. Set up your local data science work environment:

* Data science platform (Python, R): see DataScience\_SetUp\_v2\_README.md & associated setup scripts in the lab drive: …\LabManagement\Lab\_Resources
* MS Office
* Grammarly (grammar and copy editing)
* Zotero (get access to the lab’s shared library)
  + JMP or Jamovi (R alternates for stats)
  + BayesTraits & SciPhy (Comparative Methods)
  + Mrbayes, BEAST2, RAXml, RevBayes, & IQtree (phylogenies)
  + BayesTrees, FigTree, <https://itol.embl.de/>, <https://icytree.org/> (tree viewers)
  + Notepad++ (Windows text editor) or Sublime Text/BBEdit (Mac)
  + MobaXterm (Windows SSH/FTP) or Cyberduck (Windows/Mac)
  + Adobe Illustrator or Affinity Designer (vector graphics editor, Windows/Mac)
  + Adobe Photoshop or Affinity Photo (raster graphics editor, Windows/Mac)

1. Get an account and training on the Tempest cluster

* <https://www.montana.edu/uit/rci/tempest/>
* Cisco VPN: https://www.montana.edu/uit/computing/desktop/vpn/index.html

1. Get started the reading list (see expectations)
2. Identify & start 1st-year project!