

Creating Research Group Onboarding Materials

Introduction:

Our very own AVC for Research, Dr. Jessi Smith, has an exceptional research career in motivational science and social psychological aspects of gender and culture that build and advance success of marginalized and minoritized people, especially in STEM fields. In one of her recent co-authored works,¹ the need for well-crafted onboarding materials, much like a course syllabus, are needed for new student researchers, particularly undergraduates, who are entering into research. Her article suggests that these onboarding materials, which help make unwritten rules more transparent, can range from simple welcome letters² to comprehensive laboratory manuals. Resources for such documents are provided below.

These onboarding materials establish guidelines for a research group, including the responsible and ethical conduct of research.

What is this guide about?

- 1) About the PI or Research Group Leadership: who are you as people? We always write about being producers of academic capital, but this is a great place to shine with information about values, mentorship goals, personal goals, etc.³
 - a. Research & Teaching Interests
 - b. Mentoring Philosophy
 - c. Communication Preferences and/or Modes
 - d. Goals for Students
 - e. Specific suggestions for making the most of the graduate school experiences (Everhart welcome letter)
 - f. Weaknesses
 - g. Dealing with Imposter Syndrome
- 2) Our Research Group Community
 - a. What are our values?
 - b. Who are our people?
 - c. What is our motivation for doing the work that we do?
 - d. Expectations of research group members
 - e. Work-Life Balance and Taking Time Off
 - f. Mental Health Breaks
 - g. Cooperation and Research Group Etiquette (Everhart lab)
 - h. Conflict Resolution
 - i. What Our Relationship Looks Like AFTER You Leave the Research Group
- 3) Reporting Our Results (or insert Research/Scholarly/Creative Product Dissemination)
 - a. Writing a Dissertation for the PhD

- b. Writing a Thesis for the MSc Degree
 - c. Writing an Honors Paper
 - d. Manuscripts for Peer-Reviewed Scientific Journals (See [Science authorship policy](#))
 - e. Published Scientific Papers with Students
 - f. Presenting at Conferences
 - g. Social Media Posts
- 4) Responsible & Ethical Conduct of Research
- 5) The Nuts and Bolts
- a. Lab Safety and Required Training(s)
 - b. How do we work?
 - i. Meetings
 - ii. Goals – Yours & Mine
 - iii. Measuring Progress
 - iv. Mistakes Happen
 - v. The “Re” Part of Research
 - c. Using Instrumentation
 - d. Accessing the Laboratories
 - e. Laboratory Notebook Hygiene
 - f. Data Management
 - g. Scientific Communication
 - h. Ordering Supplies for Scientific Work
 - i. Pens, Paper, Printers...and Obtaining Other Miscellaneous Items

Citations:

1. I. A. Hernandez, J. L. Smith, M. T. Villodas, D. B. Thoman, “Creating an inclusive research lab with student onboarding materials.” *Nature Reviews Psychology*, **2023**, volume 2, pgs 197-198. DOI: [10.1038/s44159-023-00163-2](https://doi.org/10.1038/s44159-023-00163-2)
2. S. Everhart, “Welcome Letter.” Internet, accessed 05/15/2025. Available: <https://everhart.unl.edu/welcome.html>
3. T. T. Tuma, E. L. Dolan, “What makes a good match? Predictors of quality mentorship among doctoral students.” *CBE – Life Sciences Education*, **2024**, 23:ar20, pgs 1-18, DOI: [10.1187/cbe.23-05-0070](https://doi.org/10.1187/cbe.23-05-0070)

Resources:

[Anti-Racist Lab Manual](#)

[Lab Member Onboarding Guide](#) (Lizzy Draganova, Department of Biochemistry, Emory University School of Medicine)

“Lab Practices to Support Research Integrity.” Northeastern University Research Enterprise Services (updated 05.07.2024). Internet. Accessed 05/15/2024. Available: <https://nu-res.compliance.northeastern.edu/lab-practices-to-support-research-integrity/>

[Annika Barber Lab Manual](#) (Rutgers University)

A. Andreev, V. Komatsu, P. Almiron, K. Rose, A. Hughes, M. Y. Lee, “Research Culture: Welcome to the Lab.” *eLife*, **2022**, volume 11, e79627. DOI: [10.7554/eLife.79627](https://doi.org/10.7554/eLife.79627)

E. J. Chory, “Chory Lab Handbook,” Duke University. Internet. Accessed 05/15/2025. Available: <https://www.chorylab.com/lab-handbook>

B. Goldstein, P Avasthi, “A guide to setting up and managing a lab at a research-intensive institution.” *BMC Proc.* **2021**, volume 15 (Suppl 2): 8. DOI: [10.1186/s12919-021-00214-7](https://doi.org/10.1186/s12919-021-00214-7)

M. Syed, “Graduate Student Advising Statement,” Department of Psychology, University of Minnesota, updated July 2022. Available: https://docs.google.com/document/d/1wa067HF3iBv5M0_ao6M1GzPg4mUof_PoVIEAKyln8Xk/edit?tab=t.0