

Initial Learning Reflection

STAT 494: Statistical Genetics
Spring 2025

Assignment Objectives

1. Self-assess your skills, interests, and values
2. Reflect on your long-term goals
3. Set learning goals for this class
4. Outline the ways in which you plan to progress toward (and reach) those goals
5. Reflect on the few weeks of class

Part 1: Self-Assessment

Instructions: Before setting goals, take some time to assess your skills, interests, and values. Here are some resources that can help with this:

- [UW-Madison IDP](#): this tool is technically designed for graduate students, but as upper-level undergrads, I think it is also relevant to all of you!
- [myIDP](#): an interactive IDP tool developed for people working in STEM
- [Visual DNA](#): capacities – “who am I” - and personality assessment
- (you can probably find others on Google!)

Share a few highlights of what you learned from your self-assessment here.

Part 2: Long-Term Goals

Instructions: Reflect on your long-term/career goals. What are you hoping to do after graduating from Macalester? Write down a few highlights here. (This will help me get to know you better, and may also inform the specific learning goals that you set for this course!)

Share a few highlights here.

Part 3: (Short-Term) STAT 494 Learning Goals

This course is designed around the following learning goals:

1. Identify and explain the challenges (statistical, computational, ethical, etc.) posed by genetic data
2. Implement appropriate statistical techniques to address those challenges
3. Understand and implement tools to compare and evaluate statistical methods (e.g. simulation studies, diagnostics)
4. Accurately and clearly communicate the context, methods, and results of a statistical analysis to both technical and non-technical audiences
5. Develop skills to support lifelong learning, including:
 - a. Reading scientific journal articles and software documentation
 - b. Self-assessment, reflection, and goal setting
 - c. Collaboration
 - d. Project/time management
 - e. Be comfortable working through challenges and mistakes

Instructions (3.A): Please take a few minutes to reflect on the learning goals listed above. Which of these do you think are most relevant to your long-term goals? Which of these seem like they will be most challenging for you? Etc.

Your reflection here.

Instructions (3.B): I also want *you* to play an active role in setting learning goals for this course. Consider your self-assessment, above, and think about how this course fits in with your life, your major, your long-term goals, and your personal and academic interests. What goals do you have for this course that aren't already captured by what's listed above? This might involve expanding upon something mentioned above, or adding something entirely new!

- Use our [Crowdsourced Learning Goals](#) from the first day of class as inspiration
- Write goals that are **SMART**: specific, measurable, attainable, relevant, and time-bound (e.g., see page 11 of the UW-Madison IDP tool)
- Start with an action verb (e.g., "define", "explain", "implement", "compare", "critique", "design"): see [Bloom's Taxonomy](#) for more ideas
- Don't just set goals related to the content that you want to understand/remember (although this of course can be part of it!): see the diagram in the crowd-sourced learning goals document and Bloom's Taxonomy for other areas to consider
- Challenge yourself: set *at least* one goal that is outside your comfort zone!

List **at least two** personal learning goals here.

Part 4: Plan

Now that you've set some goals for the semester, it's important to make a plan for how you will reach and assess your progress toward these goals.

Instructions (4.A): How do you plan to reach these goals? Consider the list of activities and assessments that we will complete this semester (page 3 of the [Course Syllabus](#)): how will you use those assignments to support the goals you've outlined above? Are there other approaches/strategies that you plan to use throughout the semester to supplement/support your learning?

Describe your plan here.

Instructions (4.B): How will you assess your progress toward your goals? How will you know that you've reached them? What specifically will you be looking for in your work (i.e., to what standards will you hold yourself)?

Describe your plan here.

Part 5: Reflection

Instructions: Finally, I'd like you to answer the questions below.

- How prepared do you feel to reach the goals that you set for yourself, above? What can I do to help/support you?
- How are you feeling about the course so far? What have you learned? What are you excited to learn/do? What are you nervous about?

Your reflection here (1–2 paragraphs).