

BISC 4171 - Instructor Quick Rubric

Spring 2026 (asynchronous / independent research)

Grading breakdown (100%)

- Midterm Progress Report (Aim 1): 35%
- Final Report (Aims 1 + 2): 45%
- Lightning talk (one slide + optional recording): 10%
- Code + reproducibility package: 10%

Midterm Progress Report (35%) - quick rubric

Category	Meets expectations	Needs work
Data + setup	Counts loaded; metadata correct; folder structure clear	Missing files or unclear metadata
QC	At least one QC figure with caption + brief interpretation	QC missing or unlabeled
Aim 1 results	Ranked table + volcano (or equivalent) + top genes listed	Results incomplete or not reproducible
Interpretation	3-5 genes tied to brain biology; 1 limitation	Superficial interpretation or missing limitation
Clarity	Concise writing; figures readable; under page limit	Hard to follow; figures unreadable

Final Report (45%) - quick rubric

Category	Meets expectations	Needs work
Aim 1 finalized	Clear figures/tables; coherent conclusion	Incomplete or inconsistent
Aim 2 required	WT vs Shank3 within matched condition (min HC5) completed + interpreted	Genotype comparison missing/incorrect
Scientific reasoning	Connects to neural biology; proposes follow-up	Minimal reasoning; no follow-up
Limitations	At least two limitations and impact on conclusions	Limitations absent
Reproducibility	Results match pipeline outputs; commands documented	Results cannot be reproduced

Lightning talk (10%)

- One-slide PDF is clear and readable; includes one main figure.
- States one takeaway and one next step.
- Optional recording improves clarity but is not required.

Code + reproducibility package (10%)

- src/ contains scripts with comments and clear variable names.
- results/ contains figures and CSV outputs.
- A short README (or text file) lists install + run commands and any deviations from starter pipeline.

- AI tools may be used for debugging; no AI log requirement; students must understand and explain their work.