

ASTR 8060
FINAL PROJECT
Due 09:30 CDT April 09, 2026

Your final project will be to write an NOIRLab observing proposal. The project/proposal submission deadline is above, but note that there are intermediate deadlines for tasks to be completed prior to this.

1. Identify a science case. You do not have to choose a unique or revolutionary science program. Instead, think of this as an exercise in practicing the components of observation and proposal writing. Therefore, the best approach will be to choose a straightforward case with clear outcomes and implementation. (**Due: 09:30 CST March 5**)
2. Select an observatory+instrument combination from the NOIRLab facilities. I recommend selecting a photometric imaging project, since we have covered those topics in lecture already and you can start work immediately. Gemini/NIRI, the SOAR/SOI, CTIO/COSMOS, or LCO are good choices. You may choose a different approach, but in that case you assume full responsibility for developing the technical aspects of the program. (**Due: 09:30 CST March 5**)
3. You will prepare your proposal in \LaTeX using the NOIRLab and Gemini formatting. Download the style file and \LaTeX proposal template (even though NOIRLab says not to use this). Use Overleaf or \LaTeX installed on your local machine to compile the main proposal document. Ask if you are not familiar with these tools.
4. You do not have to use the NOIRLab online form or Gemini Phase I Tool (PIT) to prepare your proposals, but you should complete all sections of the \LaTeX document. Note that the proposal title is often added by either the NOIRLab or Gemini software, so you may need to included one in \LaTeX yourself.
5. You will prepare an outline of your proposal to make sure that you are on the right track before you invest a significant amount of time on calculations and writing. This outline should not be a full written document, but rather an outline of the ideas and calculations you will need to do. At this stage, you should have downloaded the \LaTeX forms and be working in them. Your outline should identify where your targets will come from and give the skeleton for the arguments you will make in the scientific and technical justification. For example, you may identify that your exposure time will be driven by the need to detect tidal tails on the outskirts of a galaxy. You will list that the target signal-to-noise ratio is the one needed to visually identify a tidal tail, that the typical surface brightness of such features is a number you will need, and that these together will drive your exposure time calculation. But you will not have found the limiting numbers that you need, run the exposure time calculation, or written that section of your proposal. (**Due: 09:30 CDT March 19**)
6. You will prepare a draft of your proposal. The proposal text should not be polished and the length is not yet important, but the draft should include fleshed out version of the calculations and arguments that are needed to support your proposal. (**Due: 09:30 CDT March 31**)

7. We will hold a proposal review panel during the time of your scheduled final, **09:30-10:45 CDT on Thursday, April 16**. Between turning in your proposal and this panel meeting, you will be responsible for reading the other proposals and preparing a primary reviewer summary for one of them. The primary reviewer summary is a brief (1-2 minute) oral description of the proposal background, aims, and measurements.