

Undergraduate Expectations Guide

For academic-year or summer paid research projects

1. Who This Guide is For?

This guide is for undergraduate students working in paid research roles during the academic year or summer. These roles are designed to build professional skills while supporting research work.

2. Strong Recommendation Before You Start

Completing the **Data Skills Pathway** (or taking **ATSC 494 with the pathway option**) is strongly recommended before a paid internship. The pathway helps you build the core habits needed for paid research work. You practice how to plan tasks and manage your time, document your steps and results, and communicate progress using clear evidence such as plots, tables, or saved outputs. Students who complete the pathway usually start internships faster and work more independently.

3. What a Paid Research Internship Means?

A paid internship is professional work. You are paid to contribute to active research projects, and your outputs (code, analyses, figures, documentation) will be used by the research team. Your supervisor will assign tasks with clear goals, deadlines, and quality standards. You are expected to deliver on time and to follow project instructions, workflows, and documentation requirements.

You are also expected to take ownership of your tasks. This includes tracking your to-do list, starting work without repeated reminders, and making steady progress each week between check-ins. When issues arise, first try reasonable troubleshooting steps (e.g., re-read the instructions, verify file paths and inputs, review an example, rerun with a small test case). If you are still stuck, communicate early and clearly: summarize the problem, list what you tried, and share evidence (error messages, logs, plots, or screenshots), so your supervisor can diagnose and help efficiently.

4. On-boarding Expectations (First Week)

Your supervisor and the department's administrative assistant will help you get started and explain how the project operates. During your first week, complete the following on-boarding items:

- **Accounts, access, and time reporting (setup):** Set up any required accounts and confirm you can log in successfully. Confirm where and how to record your work hours (if applicable). You will also receive access to essential project resources, including shared folders, data locations, and required software. By the

end of this step, you should be able to: (i) log in without issues, (ii) navigate to the correct project directories, (iii) locate the datasets you will use, and (iv) run the basic tools needed for your work.

- **Project Overview:** Receive a brief overview of the project goals, how success is defined, and what the data represent. By the end of this step, you should understand the project's purpose, the types of data and the general workflow.
- **First Tasks (Weeks 1–2):** Receive an initial task list for the first 1–2 weeks. Each task will include clear instructions and a specific definition of “done” (e.g., expected output, file naming and where to save it, and how to report progress or submit deliverables).

5. Work Schedule and Time Planning

You and your supervisor will agree on your weekly check-in meeting and typical work times. This may include specific days, planned time blocks, and an expected number of hours per week. Once a schedule is set, you are expected to follow it consistently and complete your work as planned. A weekly check-in meeting will be scheduled at a consistent time (typically 30 minutes). This meeting is used to review progress, unblock issues, confirm next tasks, and align on deadlines.

If your schedule needs to change, communicate early. Notify your supervisor as soon as you know about the conflict, before a deadline is at risk. Share your updated availability and propose a revised plan to stay on track with your deliverables. Use a calendar to block internship work time each week. This protects your research hours, supports steady progress, and reduces last-minute work. Also reserve time for “success tasks” that keep the project moving smoothly, such as organizing files, updating documentation, and preparing for check-ins.

6. Weekly Check-ins and Progress Updates

The weekly check-in meeting is held once per week. Come prepared to give a short update and show evidence of your work (e.g., a plot, table, script, error log, or link to an output file).

Your update should include:

- **One completed item** you can show.
- **One blocker or question**, plus what you tried (include the exact error message or key details).
- **Your plan for next week**, including any schedule changes and expected completion dates.

7. Documentation

Documentation is a core part of good scientific practice. It enables the research team to understand, reproduce, and build on your work, and it allows your supervisor to review

progress efficiently and verify results. Document your work as you go, not at the end. Short daily or weekly notes are preferred over a single long summary.

Your documentation should include:

- **Tasks Completed and Dates** (what you did and when).
- **Methods Used** (main steps, key settings, and assumptions).
- **Files Created or Updated** (file names with clear paths or links).
- **Results and Quality Checks** (what the output shows and how you verified it).
- **Next Steps** (what you plan to do next and any open questions).

Recommended Format: The usual format for documentation is the Atmospheric Science wiki pages. Use dated entries with short headings and links to outputs (plots, tables, scripts, or folders). Talk with your supervisor early to confirm the best documentation approach for your specific research project and to align on where documentation should be stored and how it should be organized.

8. Data, Code, and File Organization

Follow the team rules and standards for file naming, folder structure, and where to store outputs. Your work must be organized so that another person can open your files and understand what they contain without guessing.

Key Expectations:

- Save files in the approved shared location, not only on your personal computer.
- Use clear file names that include a date, version, or short description when appropriate.
- Keep raw data separate from processed data and final outputs.
- If you write code, your supervisor may ask you to store it in a shared repository (for example, GitHub or GitLab) so it can be reviewed, reused, and updated by the team.
- Do not overwrite files in a way that removes earlier versions. Keep a traceable version history (for example, version numbers in file names, dated folders, or commits in a repository).

9. Backups and File Safety

Research files must be protected from accidental loss. Do not keep the only copy of important work on your personal computer, a USB drive, or your personal cloud storage. Use the approved shared storage location and follow the team backup process. This ensures the project is protected if a computer fails, a file is deleted by mistake, or a team member needs to access your work quickly.

10. Integrity, Ethics, and Sharing Rules

You must follow the highest standards of research integrity. Research work must be honest, accurate, and transparent so the team can trust the results and use them in reports, papers, and proposals.

Key Expectations:

- **Be honest with Data and Results.** Do not fabricate results, remove inconvenient data, or change values to make results look better. If something looks wrong, report it and ask questions.
- **Give Proper Credit.** Do not copy text, figures, code, or ideas from other sources without citation or permission. If you use an existing script, dataset, or method, clearly note where it came from.
- **Follow Team Rules for Research Materials.** Some data, methods, and results may be owned by the research group or the university, depending on the project funding and agreements.
- **Do not Share Outside the Team without Approval.** Do not share datasets, code, model outputs, plots/figures, draft results, or project ideas with anyone outside the project team unless your supervisor gives approval. This includes sharing with friends, posting online, or using the material for another class or project.
- **Ask before Presenting or Publishing.** If you want to use internship work in a poster, resume portfolio, or personal website, ask your supervisor first so the team can confirm what is allowed.

11. Learning Plan and Evaluation

Each internship may include a short learning plan. The learning plan outlines:

- **Skills to be Developed** (e.g., data organization, quality control, plotting, coding, or basic analysis).
- **Core Tasks and Expected Products** (what you will work on and what you are expected to produce).
- **How Progress will be Tracked** (regular check-ins, documentation, and defined deliverables).

Your supervisor will evaluate your performance using the following criteria:

- **Reliability:** following the agreed schedule, meeting deadlines, and completing assigned tasks.
Communication: providing clear updates, raising questions early, and responding to feedback professionally.
- **Documentation:** keeping work traceable and reproducible for the research team.
- **Skill growth:** improving over time and applying feedback effectively.
- **Project contribution:** producing usable outputs that help the research progress.

12. Typical Deliverables (Examples)

Your supervisor will define your deliverables. Common examples include:

- Simple analysis scripts or notebooks that run correctly and are easy to follow.
- Quality-control summaries and basic plots that show data coverage and potential issues.
- Validation plots comparing observations and model output, with short notes explaining what the plots show.
- Organized datasets with a short README and documentation describing the files, variables, and processing steps.
- A short written summary of results and next steps (what was done, what was found, and what should happen next).
- An end-of-term or end-of-summer presentation, poster, or short briefing to share your work with the team.

13. If expectations are Not Met

Your goal is to succeed, and the team will support you. However, a funded internship requires professional performance and reliable delivery. If deadlines are repeatedly missed, meetings are consistently unattended or unprepared, communication is not maintained, or work is not documented, the funded role may be reduced or ended. This may occur when the project can no longer depend on timely and traceable contributions. If any issue affects your ability to work, health, family responsibilities, coursework, workload, or technical problems, communicate early. Early notice allows your supervisor to adjust tasks, timelines, or provide support so you can remain on track.