

HARVARD FOREST SUMMER RESEARCH PROGRAM IN ECOLOGY

EXPECTATIONS FOR MENTORS

The Harvard Forest summer program is an 11 week internship in which approximately 15-20 undergraduate students conduct scientific research under the guidance of a mentor. Our goal is to provide an excellent research and educational program to students who are eager to learn and pursue science. A general overview of the program is at: <http://harvardforest.fas.harvard.edu/education/reu>. The minimum expectations we have for mentors in our program follows.

The success of the HF summer program depends upon mentoring provided by senior and junior researchers to summer students. The goal is to foster mentor/mentee relationships among the participants. **Each mentor must have a basic understanding of all aspects of the project and be able to advance student understanding of the scientific basis and technical aspects of the work, including its relevance and applications in the field.** The mentor is to lead the participants from a relatively dependent to an independent status as their competence warrants. Mentors must be prepared to spend time and energy teaching the mentee about the project in specific and ecology in general.

Contact Manisha Patel at any time to discuss questions, comments and concerns you may have about the summer program.

Before the summer

Fall

1. Assess summer assistance needs and resources.
2. Determine your availability for supervising and training a student. This entails:
 - a. Scheduled daily meeting with student(s) for the first 2 weeks of the program.
 - i. Consistent availability in person, email, skype or on-line chat
 - ii. In person training is VITAL as it results in *dramatically* improved student performance over the course of the summer.
 - b. Meet (in person) with the mentee at least once a week thereafter.
 - c. Be available (in person, via email or telephone) during the last two weeks of the program.
3. Attend the mentor meetings where summer program goals and expectations are discussed.

NOTE: It is important to have all project mentors communicate with each other and be able to guide students about all aspects of the project.

Spring (see Program Calendar for deadlines)

4. Participate in reviewing applications, interviewing and hiring process of student(s):
 - a. Coordinate closely with Manisha Patel regarding decisions.
 - b. Be explicit during the interview and hiring process regarding
 - i. Research: what the student will be doing, hours needed to work, working conditions, scope of independence they will have in their work, etc.
 - ii. Program: educational activities, assignments, living on site in rural area, meal plan, general job responsibilities (communication, time management, etc.)
 - c. Send an email to student(s) upon hiring confirming the specifics for your project.
 - d. Provide project background information/reading before start of the summer program.

During the Summer: research and education

Weekly:

- Meet regularly with student(s) to discuss:
 - The overall research project.
 - Data analysis (1-2 hours a week of statistics).
 - Student progress including concerns, questions, and other research opportunities.
- Approve weekly time sheets by Thursday noon.

Weeks 1 - 2:

1. Attend mentor orientation on day 2 of program.
2. Meet with student(s) on the second day of the program to discuss summer plans and expectations.
3. Start working with student(s) on the third day of the program. (If the project will not start immediately or fluctuates during the summer let Manisha know, as other mentors may be able to use an extra pair of hands.)
4. Work with student(s) daily for the first 2 weeks of the program.

Week 3:

5. Meet regularly with student(s), **at least once a week** to discuss research, data, and student progress.
6. At the end of the 3rd week, students are required to submit a 2 page research proposal. *This is a good indicator as to how well the student(s) understands the project. Please provide feedback and work with student(s) to define a research question.*

Week 4:

7. Provide feedback on the research proposal. If the student is struggling to understand the research, this is the week to spend extra time with the student on the overall research
8. Optional – You can choose to have your student continue refining the research proposal and turn it into a report (or manuscript) to be turned in at the end of the program.

Weeks 5 – 9:

9. Meet regularly with student(s), **at least once a week** to discuss research, data, and student progress.

Weeks 10-11:

10. Provide reasonable amount of work time for student to prepare for symposium.
11. Be available (in person, via email or telephone) during the last two weeks of the program to provide assistance to the student in preparing for the symposium.
12. Wrap-up up all project related issues by Wednesday of week 11. (Only authorize the time sheet for the last week after the student has turned in their compiled data).
13. Attend the end of summer program symposium (Thursday of week 11).

Other considerations

- Mentors will treat all students (and all members of the HF community) in a respectful manner, recognizing the impact that their opinion may have on the student.
- If the student has an opportunity to conduct a research project, mentor should provide reasonable amount of time during work hours for student to conduct the necessary research and provide guidance on experimental design and analysis.

After the Summer: continued mentoring

1. If appropriate, continue working with the student in further developing his/her research.
2. Update Manisha about student(s) contribution to presentations, publications, etc.