# Laboratory Assistant - Biology

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**Introduction:**

The UTSA Biology lab is seeking highly motivated and organized students interested in learning molecular skills. The lab is a molecular ecology lab that focuses on marine fishes. The Lab uses two approaches

1) population genetics approaches to determine patterns of population structure in fishes (deep water snappers, reef fish, and seahorses/pipefishes);

2) environmental DNA to characterize marine and aquatic fish/plankton communities.

We are seeking undergraduate students who can dedicate at least 10 hours per week for a minimum of two semesters.

**Project Dates:**

Start Date: 10/15/2021 - End Date: 5/1/2023

**Students Needed:**

**Type of Project:**

Individual

**Student Responsibilities:**

Responsibilities will include sample inventory, DNA extraction, PCR, running gels, DNA quantification, and library preparation for Illumina sequencing. Some field work is possible.

**Time Commitment:**

10 hour(s)

**Student Requirements:**

You must be highly organized, dependable, and prompt. Molecular experience from coursework is a plus including the use of pipettes and PCR. Biology majors interested in graduate school and academic research will be given priority.

**Additional Notes:**

Office of Undergraduate Research

## Undergraduate Work-Study Research Job Description Template

**Objective:** Undergraduate students at UTSA who qualify for Federal Work-Study may participate in an undergraduate research experience, working on experimental, analytical, or observational undergraduate research projects in a formal UTSA research setting.

Duties may include: *[insert duties here]*

Specific duties are based on individual student background and ability. Projects may vary depending on the research needs at the time. Students will be supervised by the appropriate content experts, PI or other UTSA faculty members or designated content expert.

The appointment for this position will fall under the respective college or division and under the supervision of a faculty member conducting a research project. The undergraduate student will be responsible for assisting the faculty member or other content experts in a variety of non-administrative tasks which may include preparing resources, equipment, materials for the research, documenting results, etc in support of research activities.

Research projects should ideally lead to a thesis or be directly related to the student's area of study. The research project is intended to provide the opportunity to learn proper research procedures and techniques. The supervising faculty is responsible for providing ongoing feedback and a formal assessment at the conclusion of the semester/assistantship.

**Position Summary:** The undergraduate student will provide support to the Principal Investigator/Faculty or designated Graduate student and research support for the designated research project/area within the respective college/unit/center etc.

**Project Dates:** Fall 2022 – Summer 2023

**Type of Project:** Group/Individual

**Minimum Qualifications:**

- Enrolled in a degree-seeking program at UTSA with a maintained minimum GPA of 2.5
- Exceptional customer service skills
- Interest in undergraduate research, problem solving and team work
- Must meet Federal Work-study eligibility requirements

**Schedule:**

- Student may work a maximum of 19 hours per week. Shift may include day, evening and weekend hours to be determined by PI/Faculty Mentor and also on availability of funds.

**Examples of duties, but are not limited to:**

- Research and collects data through complex techniques and procedures, library research, structured interviews or other project specific methodology.
- Interprets, synthesizes, enters and analyzes data.
- Schedules, organizes and reports on status of research activities.
- Plans and modifies research techniques, procedures, tests, equipment or software management.
- Writes and edits materials for publication and presentation.
- Meets with faculty supervisor on regular basis to maintain ongoing communication regarding the quality of the assistant's performance.
- Statistical analyses and procedural reports
- Run trials, design experiments, run experiments, collect data
- Performs other related duties as required.

**Time commitment:** 19 hours per week maximum

**Student Preferred Qualifications:**

1. Interest & knowledge of the scholarly research processes
2. Time management and organizational skills
3. Public speaking and presentation abilities
4. Strong interpersonal skills
5. Interest & experience in the subject matter of the research project in question
6. Ability to work independently and solve technical and methodological issues when they arise

**Additional Notes:**

## Undergraduate Research in Soft Biomimetic Materials - Materials Science and Engineering

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The Biomolecular Engineering Lab is looking for undergraduate researchers to participate in a new project funded by the National Science Foundation. The project involves the development of peptide-based liquid droplets to mimic intracellular structures that catalyze chemical reactions. The undergraduates will learn peptide synthesis, spectroscopic methods, imaging, and general wet lab techniques. The students will be directly supervised by graduate students or technicians and expected to participate in group meetings. Once trained in the different techniques in the lab, it is possible to transition to an independent project depending on the students time commitment.

**Project Dates**

Start Date: 1/18/2022 - End Date: 1/1/2024

**Students Needed**

**Type of Project**

Individual

**Student Responsibilities**

Be trained in lab safety. Help synthesize peptide molecules and characterize proper synthesis. Help characterize peptide based liquid droplets and encapsulation of enzymes. Learn lab instrumentation. Read literature in the field. Keep proper lab notebook.

**Time Commitment**

19 hour(s)

**Student Requirements**

Background in chemistry or materials science preferred, but not required. Looking for a motivated student(s) that is willing to learn exciting new science at the intersection of biomaterials, polymer science, and catalysis. Time commitment is 19 hours per week. Ideally, the student can spend at least a few hours at a time in the laboratory.

**Interested in Working With the Following Programs**

**Additional Notes**