

RESEARCH TUTORIAL ENROLLMENT INSTRUCTIONS
DUE DATE: Monday of Second Week of each quarter

These instructions are specific to Chem/Biochem 196A, 196B, or 199 enrollment. Each department has DIFFERENT instructions provided when printing the contract!

PREREQUISITES:

- Junior standing with a minimum 3.0 GPA in the major **OR**
- Senior standing **OR**
- Consent of the instructor.

COURSE INFORMATION AND GRADING POLICIES:

- **Chem 196A: Research Apprenticeship (take during 1st & 2nd research quarters)**
 - To be taken for the first 8 units of Research Tutorials in Chemistry and Biochemistry. Variable 2 to 4 units a quarter. Mandatory P/NP grading.
- **Chem 196B: Research Apprenticeship (take during 3rd research quarter)**
 - Prerequisites: 8 units of 196A, consent of instructor, and consent of department chair. Variable 2 to 4 units per quarter. May be taken for a maximum of 4 units. P/NP or letter grading.
- **Chem 199: Directed Research**
 - Prerequisites: 8 units of 196A on related material, consent of instructor, and consent of department chair. Variable 2-4 units per quarter. Can be repeated for 12 units max. P/NP or letter grading.
- **Chem 99: Student Research Program**
 - Administered through the Undergraduate Research Center (2121 Life Sci Bldg.) and have different requisites, deadlines, and guidelines. Mandatory P/NP grading.

STUDENT INSTRUCTIONS:

- Go to the "Contracts" link on your MyUCLA page. Select and complete the appropriate contract (196A, 196B, or 199).
- In the area designated for the description of the project, write "**See Attached.**" A required written proposal must accompany your application. Instructions are on the back of this sheet. Assistance may also be received from your faculty mentor.
- In the area designated for the description of your tangible evidence to be completed at the end of the quarter, write "**Report.**" You will have to write a final report that is due to the Undergraduate Office by Friday of Finals week. Guidelines for the final report will be e-mailed to you during 6th or 7th week.
- Obtain your faculty mentor's signature on the Contract. The Undergraduate Office staff will obtain the Department Chair's signature.
- A mandatory lab safety certification course through the Environment, Health & Safety Office (<https://worksafe.ucla.edu/>) must be completed and submitted with your application. **A copy of the lab safety certification must be submitted each quarter, even if you previously submitted one. Enrollment will NOT be processed without this.**
- Completed contracts, proposals, and the lab safety certification must be turned into the Undergraduate Office (4006 Young Hall) by Monday of the second week of the quarter.**

RESEARCH TUTORIAL PROPOSAL GUIDELINES (New and Continuing Research Tutorial Students)

In order to enroll in Chemistry & Biochemistry Research Tutorials each quarter, you are required to submit a research proposal describing your research project. Clearly describing your research project will aid you in carrying out the research during the quarter and in writing your research report which must be submitted at the end of the quarter. **You should work with your research mentor in preparing your proposal and research report.**

Your research proposal should include the following:

1. A descriptive **Title**.
2. A brief (<250 words) **Abstract** describing the background, long-term goal(s), short-term objectives, and specific methods of investigation of your proposed research project.
3. A brief **Introduction** summarizing the background of your proposed investigation and your previous research accomplishments on the project (if applicable). The background should clearly summarize the essential chemistry or biochemistry relevant to your project and place your project in context of known science. **You must have citations to the scientific literature.** Indicate how this quarter's objectives relate to the work you have completed in previous quarters (if applicable). Explain how it is different (if applicable).
4. A description of what you propose to do (**Methods**). What hypotheses will your work test or what questions do you hope to answer? Describe the tasks or plan of experiments you will be performing including laboratory techniques you will be learning (or applying) and the kind of data you will be collecting (if applicable).
5. A brief **Discussion** describing how your proposed experiments will contribute to the short or long-term objectives of your research project- i.e. how does your work fit into the "big picture". Describe the direction your research project will follow in succeeding quarters.
6. A list of cited **References** using the proper format for literature citations. For Chemistry research use the format found in the *Journal of the American Chemical Society* and for Biochemistry research use the format found in *Biochemistry*.

In addition to the guidelines outlined above, you are required to indicate the amount of time you expect to spend on the course (12 hours/week is considered the *minimum* for 4 units of Research Tutorials), and how frequently you expect to meet with your faculty mentor.