



UCLA

**Contract Course - Directed Research
MECH&AE 199**

Term: **26W RG**
Contract ID: **228775**

Student:

Name: **PHAM, DYLAN LONG**
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Major: **Physiological Science**
Email: **dypham@ucla.edu**

Faculty Mentor:

Name: **YOSHIDA, KYLE**
Address:

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Safety Training:

Proof of Completion of the Laboratory Safety Fundamental Concepts (LSFC) course is required for participation in research with this mentor. Course Expiration Dates: Fundamentals - 2026-12-31 Refresher - N/A.

Course Details:

Course:	MECH&AE 199		
Units:	4.0	Grade Type:	LG
Course SRS:	210-895-202	Section Number:	002
Design Units:	1.0	Lab Units:	3.0
		Major Option:	

Course Description:

Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit with school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Course Proposal:

Please provide a short description of the research project you will be working on with faculty supervision. Include a brief description of how you will proceed both in the research phase and in your approach to the final project.

I will investigate whether the Colavita Visual Dominance Effect (CVDE) remains upheld in the presence of visual (V), auditory (A), and haptic (H) stimuli. Using a trimodal case of the Race Model Inequality (RMI), we will compare whether combining V, A, or H elicits faster response times. Based on the reaction time data, such findings will allow us to further explore how the brain integrates V, A, and H stimuli.

During the research phase, I will assess previous work regarding CVDE and RMI, developing an iOS application that delivers unimodal, bimodal, and trimodal stimuli. Collecting and analyzing participant app reaction time, I will use both a traditional RMI distribution as well as a simple linear regression to determine whether V continues to dominate individual performance. Using such results, I will then assess whether faster responses arise from multi sensory integration or independent processing.

For the final project, I will formalize the methods, data, and results in a culminating paper, informing the design of future haptic interfaces for neuroscience and human physiology.

Contract Terms:

- A student who has an outstanding Incomplete in an Upper-Division Tutorial (195-199) may not enroll in another Upper-Division Tutorial until the grade of Incomplete has been removed.
- In order to enroll in an Upper-Division Tutorial (195-199), a student must have one of the following:
 - junior standing and at least a 3.0 GPA in his/her major field
 - senior standing
 - graduate standing
- The total number of units allowed for a letter grade in Upper-Division Tutorials (195-199) is 32.
- Credit for Upper-Division Tutorials in a single term is limited to a maximum of 8 units.



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- Individual faculty mentors may sponsor a maximum of seven (7) students enrolled in an Upper-Division Tutorial in any one term.
- Tangible evidence of the work accomplished for an Upper-Division Tutorial must be submitted to the supervising faculty member and the department offering the course before a grade will be assigned.
- If approved enrollment in a contract course, I understand that I must submit to the HSSEAS Office of Academic and Student Affairs, 6426BH, a copy of my final report. This copy must be submitted no later than 5pm on Friday of finals week.
- * Students taking this course for excess units will NOT satisfy any degree requirements. Refer to <http://www.seasoasa.ucla.edu/> concerning HSSEAS policy on 199 and 194 course credit.
- I agree to be a presenter in the annual Undergraduate Research Week Poster Day. I will review the additional information found at <https://sciences.ugresearch.ucla.edu/research-week/>.

Faculty Mentor Signature and Date

Faculty Mentor's Department Undergraduate Vice Chair or Chair Signature and Date

Contract Instructions

- Obtain the necessary signatures.
- Submit your completed contract by the enrollment deadline (Friday of the 3rd week of classes). *Consult the department in advance for exceptions to this deadline.
- Engineering Department 199 contracts must be electronically signed by the Faculty mentor and the Department chair or Vice-Chair. Faculty who are not able to electronically sign contracts may email their confirmation. This confirmation must include the student's name, UID, and contract number.
- Please review the Engineering 199 course changes effective Fall 2024 at <https://ucla.box.com/s/6yy1bvja0cisetbpbc9ptmar5nxvs7nm>
- It is your responsibility to check the status of your contract by returning to your MyUCLA Contract Courses page or by verifying your enrollment on your study list.