

# Integrating Climate Action into the Undergraduate Academic and Professional Lexicons

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## Introduction

Climate action is the most important movement to gain momentum in recent decades. The Intergovernmental Panel on Climate Change is issuing ardent warnings about the irreversibility of climate change, and although many UCLA students are aware of the coming dangers, few are confident in their ability to enact consequential change.

As our generation (Gen Z) moves through their college experiences, many influences emerge in the molding of our academic and professional aspirations. Climate action should be the most consequential of these influences. Despite the best efforts of UCLA's sustainability community, students outside of this community's influence are less likely to be exposed to resources pertaining to climate action. As a result, this project seeks to answer two questions:

(I) "Can climate action be integrated into the undergraduate academic lexicon of UCLA?"

(II) "How can climate action be integrated as professional resources to reach beyond the undergraduate sustainability sphere?"

The more students are exposed to conversations and language about climate action, the more comfortable they will be with enacting action themselves. This project seeks to encourage this trend in both the early and later stages of an undergraduate's career. A student's academic interests are most malleable in the underclassman years, and their professional aspirations typically begin to take form in the upperclassman years. Targeting both of these important time frames is key to integrating climate action successfully. Deliverables take the form of (I) a case study in the Life Science 7C quarterly curriculum for Professor Rana Khankan and (II) a hub of professional resources for all majors seeking to integrate climate action into their early career trajectories.

## Project Goals

This project had two goals:

- (I) Palpably shift language and content within the LS 7C course from a medical focus to one of climate action.
- (II) Create a resource hub for UCLA undergraduate students seeking post-graduate employment across all sectors, integrating climate action values throughout.

## Additional Projects

In addition to this project, I supported to continuation of the UCLA CNI Ambassadors program, assisting the creation of materials for Ambassador projects such as a Climate Anxiety event.

## Materials and Methods

To answer questions (I):

The LS7 series was selected in particular because it reaches a high quantity of students at an early stage in their academic career (roughly 100 students per quarter). LS 7C was selected as it represents the final course in the Life Science series, and an opportunity for foundational knowledge to supplement climate action integration exercises. I conducted a Qualtrics XM survey with 5 key questions to identify LS 7C taught by Dr. Rana Khankan as my case study. With the pedagogical goal of increasing student familiarity with climate action through exposure to climate issues in learning materials offered by the LS7 series, I worked in a 1 on 1 consulting style project scheme with Dr. Khankan using CCLE and the Google Suite. In the early stages of this section of the project's development, I consulted Dr. Shanna Shaked and Dr. Cully Nordby for their pedagogical insights.

To answer question (II):

I did a review of existing professional materials available to graduating students both within and outside of the sustainability sphere at UCLA. Taking a course on Tableau, I learned how to best communicate my amassed resources in a way that is accessible for all students.

## Results and Outcomes

For goal (I), I created several new materials for Dr. Rana Khankan's LS 7C course, including lecture slides and discussion activities on the following questions:

*What effects does climate change have on basic animal-cell function?*

*How does climate change disrupt homeostasis - particularly in the case of thermoregulation?*

*What effects do air quality and pollution have on the respiratory system?*

*How does a decline in air quality and respiratory health impact public health at large?*

For goal (II), I created a job resource forum, an infographic series on connections between non-environmental jobs and climate action, an informational hub (climate action oriented) of UC and external videos angled for post-graduate discussion and some resources to tackle climate anxiety.

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	A	B	C	D	E
1	Site Name	Source	Concentration	Quality (1-5)	Observations
2	Yale	<a href="https://resources">https://resources</a> [Source]		5	Contains all sites below
3	Acre	<a href="http://acre.com/jr">http://acre.com/jr</a> Corporate		4	International/UK based
4	Idealist	<a href="https://www.idea">https://www.idea</a> General		2	Too general
5	NonProfitJobs	<a href="https://nonprofit">https://nonprofit</a> Non Profit		3	Up to date but unsophisticated
6	Cyber Sierra	<a href="http://www.cyber">http://www.cyber</a> Religious?		1	Not able to be supported by UCLA
7	Eco Jobs	<a href="https://ecojobs.c">https://ecojobs.c</a> General		4	Up to date & constantly being refreshed, good breadth
8	Environmental C	<a href="https://environm">https://environm</a> General		4	Up to date & constantly being refreshed, good breadth

Extract from Job Forum deliverable, containing quality rankings, observations etc... for over 160 sites

## Conclusions

I believe that both of my initial questions were answered throughout this project. This project demonstrates that it is in fact possible to integrate climate action into the undergraduate academic lexicon of UCLA, especially in the notoriously rigid syllabus structure of the Life Science 7 Series. This project also demonstrates that professional resources can be given a climate emphasis that is constructive for both sustainability and non-sustainability focused students nearing the end of their undergraduate careers.

## Future Goals

(I) I hope that this case study in material integration can be expanded to other courses within the LS Series, the Undergraduate Sciences and hopefully across both South and North Campus.

(II) These professional materials should be housed in an accessible hub that I am still building and hope to have completed by June. At that point, I will disseminate the hub to identified undergraduate virtual "hotspots" in and outside of the sustainability sector.

## Acknowledgements

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## Case Study: Drosophila melanogaster

The Fruit Fly, or *Drosophila melanogaster* uses Rab signaling, a mechanism complicated by elevated temperature in ectothermic animals.

Ectothermic regulation of body temperature relies on external sources such as sunlight

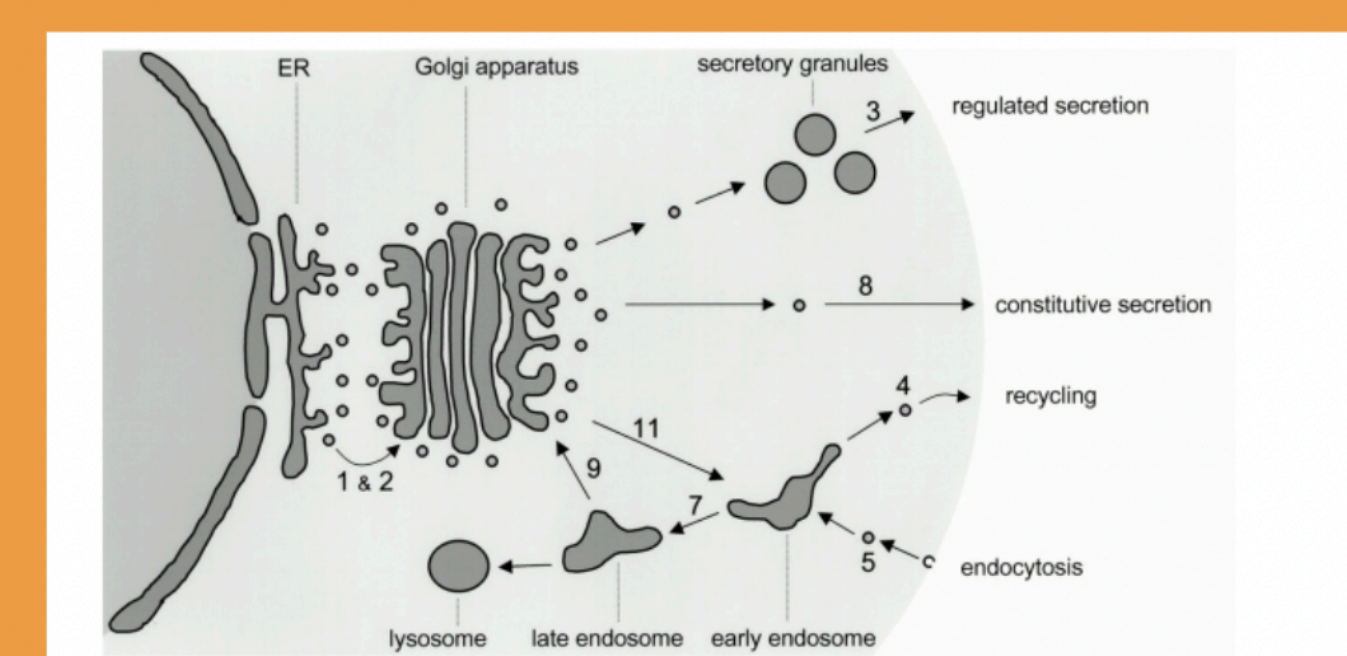


Figure 1: Summary of Rab Signaling in a Eukaryotic Cell. Image downloaded from: <http://physiologyonline.physiology.org/cgi/content/full/12/2/56>.

Example Slide for Dr. Khankan Deliverable #2