

# IB 290 Introduction to Undergraduate Research in Integrative Biology

2 Credit Hours

Professor Ken N. Paige

Department of Evolution, Ecology & Behavior

School of Integrative Biology

Office: Room 481, Morrill Hall

505 S. Goodwin, Urbana

Office hours: by appointment, email: [kpaige@illinois.edu](mailto:kpaige@illinois.edu)

## **Course Goals:**

1. Introduce you to the practice of scientific research through hands-on experience and direct faculty interaction.
2. Expose you to the diversity of research topics, methods and careers in Integrative Biology.
3. Practice the steps involved in devising, planning, executing and presenting a scientific research project.
4. Follow the path of knowledge generation, from the research project to the primary literature to the textbook and society.

## **Seminar: Mondays 4-5 pm**

- We will meet weekly and have directed discussions focused on various aspects of the research process.
- Attendance is required at all seminar sessions. If you have a conflict with any of these sessions, contact the course coordinator as soon as possible.

## **Research**

- Each student will be assigned to a faculty advisor. Students will work three hours each week on the research project and have regular contact with their faculty advisor. The organization of research roles in each team is at the discretion of the research advisor.
- We will make every effort to match you with the faculty advisor of your choice, but it is likely that some students will not be matched with their top choice.
- Research teams will present their research results in an in-class symposium on either November 29 or December 6 (since there will be ~9 teams of students), from 4-5pm. Each presentation will last 12 minutes and will be followed by 3 minutes for questions from students and faculty.

## **Emergencies**

### **General Emergency Response Recommendations**

[Run>Hide>Fight Video](#)

[Building Emergency Exits](#)

## **Academic Integrity**

[According to the Student Code, 'It is the responsibility of each student to refrain from infractions of academic integrity, from conduct that may lead to suspicion of such infractions, and from conduct that aids others in such infractions.'](#) Please know that it is my responsibility as an instructor to uphold the academic integrity policy of the University, which can be found here: [http://studentcode.illinois.edu/article1\\_part4\\_1-401.html](http://studentcode.illinois.edu/article1_part4_1-401.html).

## Disability Accommodations

To ensure that disability-related concerns are properly addressed from the beginning, students with disabilities who require assistance to participate in this class are asked to see me as soon as possible.

## Lecture

August 23 -	Course Introduction
August 30 -	Lab selection from Faculty descriptions
September 6 -	No Class – Labor Day
September 13 -	Discussion Assignments - Why do you want to do research?; Nature of Science - questions/discussion
September 20 -	Discussion/Assignments – Science or pseudoscience?; Reading Scientific Literature
September 27 -	Critiquing Scientific Literature – Reading Assignment/Questions//Discussion
October 4 -	Describe Your Groups Research Mentor’s Biography; Mentor/Mentee Contract
October 11 -	Assignments - Reference Letter; Three Profs Exercise; When Problems Arise
October 18 -	Writing a Grant Proposal Proposal Introduction – Assignment
October 25 -	Careers in Biology – Presentation Proposal Introduction/Methods – Assignment
November 1 -	Grants and Fellowships – Funding - Assignment Proposal – Broader Impacts – Assignment
November 8 -	Presentation – Research Ethics
November 15 -	Giving a Scientific Presentation
November 22 -	No Class - Thanksgiving Break
November 29 -	Research Group PowerPoint Presentations on Semesters Research Projects (5 groups)
December 6 -	Research Group PowerPoint Presentations on Semesters Research Projects (4 Groups)

---

## Grading

Your grade in this course will be based on completion of pre-seminar worksheets, participation in seminar discussions, research participation and your research presentation. Further details about the assignments will be provided throughout the semester.

Assignment	Points	Final Grade	Course Points Earned
Worksheets	50	A	270-300
Discussion Participation	50	B	240-269
Research Participation	100	C	210-239
Research Presentation	100	D	180-209
<b>Total</b>	<b>300</b>	F	0-179