For December 2018 & May 2019 Graduates

BIOLOGICAL SCIENCES HONORS PROGRAM
INFORMATION FOR INTERESTED JUNIORS

Optional Information Sessions (Duplicate Sessions):

- **Monday, March 5, 2018, 206 Stimson, 4:45-5:30 pm**
- **Friday, April 20, 2018, G01 Stimson Hall, 12:20-1:10 pm**

- Application and research proposal are due by Friday, June 1, 2018.
  Access online submission using the link on the OUB honors webpage:
  [https://biology.cornell.edu/research/honors](https://biology.cornell.edu/research/honors)

The 2018-2019 Honors Faculty Committee

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<th>Research Group</th>
<th>Group Leader</th>
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<tr>
<td>Animal Physiology</td>
<td>Professor Ellis Loew</td>
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<tr>
<td>Biochemistry</td>
<td>Professor Gerald Feigenson</td>
<td>5-4744</td>
<td>gwf3</td>
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<td>Ecology and Evolutionary Biology</td>
<td>Professor Irby Lovette</td>
<td>4-2140</td>
<td>ijl2</td>
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<td>Genetics and Development</td>
<td>Professor Tudorita Tumbar</td>
<td>5-6542</td>
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<td>Microbiology</td>
<td>Professor James Shapleigh</td>
<td>5-8535</td>
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<td>Molecular and Cell Biology</td>
<td>Professor Yuxin Mao</td>
<td>5-0783</td>
<td>ym253</td>
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<td>Neurobiology &amp; Behavior</td>
<td>Professor Christiane Linster</td>
<td>4-4351</td>
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<td>Plant Biology</td>
<td>Professor Wojtek Pawlowski</td>
<td>4-8745</td>
<td>wp45</td>
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<td>Honors Coordinator</td>
<td>Colleen Kearns</td>
<td>5-5233</td>
<td>cmk4</td>
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<tr>
<td>Honors Program Administrative Assistant</td>
<td>Kristy Long</td>
<td>5-6859</td>
<td>kll25</td>
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For more information on the Honors Program, please visit 216 Stimson Hall, email biohonors@cornell.edu, or contact Kristy Long (kll25).

Admission to the Honors Program

Any CALS major may apply to Biological Sciences Honors if your research has sufficient biological content. You can find a list of all the CALS honors programs here: [https://cals.cornell.edu/academics/student-research/honors](https://cals.cornell.edu/academics/student-research/honors). If you are a non-major interested in applying to the biological sciences honors program, please consult Colleen Kearns, Bio Honors Coordinator. Students in Arts & Sciences must do Honors in their major. If you are in the College of Arts & Sciences and concerned about whether your research is a good fit for biological sciences, please schedule a meeting with Colleen Kearns, Bio Honors Coordinator.

For admission to the Biological Sciences Honors Program, students must have:

- completed at least 30 credits at Cornell or have a junior status as a transfer student.
- an overall Cornell cumulative grade-point average of at least 3.0.
- a Cornell cumulative grade point average of 3.0 in all coursework related to the subjects of biology, chemistry, mathematics, statistics, and physics courses.
For December 2018 & May 2019 Graduates

Students must maintain the 3.0 Cornell cumulative and science GPA through graduation. Interested candidates with a GPA below 3.0 are welcome to make an appointment to discuss options with Colleen Kearns, Honors Coordinator.

Application Requirements
- Applicants must be at least a second semester junior planning on graduating in December 2018 or May 2019.
- Application must include a 1-2 page Honors Research Proposal.
- Applicants are encouraged to attend one of the 2018 Honors Research Presentations in May. See the OUB Events Calendar on our home page for dates.
- Program application can be found on the Bio Honors web page: http://biology.cornell.edu/research/honors
- Deadline for the application and research proposal is Friday, June 1, 2018.

Program Requirements
Candidates are assigned to an Honors Faculty Group Leader in their research area (see faculty committee on Page 1 and on Bio Honors web page). Students will

1) Report on their research projects in a mandatory group meeting with the Honors Group Leader in the fall semester or beginning of spring semester (see more below).
2) Attend a second mandatory spring meeting with Colleen Kearns, Program Coordinator, to go over the process for thesis submission.

The Honors Research Supervisor
Students must work with a current Cornell faculty member who agrees to oversee their Honors research. Students may work with any faculty member on campus as long as the content of the project is biological in nature. The Honors Committee will evaluate all proposals for sufficient biological content at the time of application. Thesis supervisors should not be on sabbatical leave in the spring of the graduation year.

Financial Support for Honors Projects
Limited funding may be available from a student's college to help purchase supplies for honors research. Students should consult their research advisor to identify research expenses for reimbursement and discuss submitting a proposal for funding. Proposals for CALS funding are accepted early in the fall semester and in March if there are funds left over from fall. For details, see https://cals.cornell.edu/academics/student-research/undergraduate-grants-proposal/. Proposals in Arts and Sciences are accepted on a rolling basis. See http://as.cornell.edu/undergraduate-research#applying:-einhorn-&-undergrad-research-fund) for more details.

For specific questions about research funding, students in the College of Agriculture and Life Sciences should contact Donald Viands, Associate Dean and Director of Academic Programs in 140 Roberts Hall. Students in the College of Arts and Sciences should contact Assistant Dean Rich Keller in KG17 Klarman Hall.

Honors Research Groups
Accepted students will be assigned to the Honors Research Group that is the best fit for the content of their project-see Honors Faculty Committee on Page 1. Each honors group will meet towards the end of fall semester or in January. Attendance is mandatory for the honors group meeting. The Honors Group
Leader will inform students of the time and place of the meeting. At this time, students will informally present on the nature of their project and the relevant technical procedures. In the spring semester, students will submit their thesis in early April and give a public presentation of their research in an Honors seminar or poster session at the end of the semester.

**The Thesis**

The candidates present their thesis to the Biological Sciences Honors Faculty Committee for evaluation to be accepted. Biological Sciences Honors uses two models to review theses. In some honors groups (currently Animal Physiology and Neurobiology and Behavior), the candidate presents their thesis to a thesis committee in late April or early May *(thesis by committee)*. In the other groups, the thesis is submitted to the group leader and goes out for anonymous faculty review in mid-April *(thesis by review)*. The thesis should be written in the form of a research manuscript in a leading journal in the disciplinary area of research. Students should work with their research supervisor to identify a journal in their field. In general, the thesis should consist of an abstract, short introduction, relevant materials and methods, a concise presentation of the meaningful data, and a discussion of the conclusions that does not delve into inappropriate speculation. Generally, the thesis should not exceed 20 typewritten pages, double-spaced, but not including figures, tables and literature cited. The student should seek the guidance of his or her research supervisor and should conduct a thorough literature search on the topic. While an extensive literature review should not be included in the thesis, we expect the student to indicate in the discussion and conclusion parts of the thesis how the results and findings contribute to the scientific understanding/advancement of the problem. Although the research supervisor must decide if the student’s results are of a sufficient amount in quality or reliability to justify their presentation in an honors thesis, the ultimate responsibility for the thesis is the student’s. Examples of previous honors theses are available in the Office of Undergraduate Biology (216 Stimson Hall) or online at [https://ecommons.cornell.edu/handle/1813/2936/discover](https://ecommons.cornell.edu/handle/1813/2936/discover). The Honors Faculty Committee meets in May to formally accept the theses and award Latin Honors (Arts and Sciences) or Distinction in Research (CALS). Written guidelines for the biological sciences honors thesis can be found on our honors web page: [https://biology.cornell.edu/research/honors](https://biology.cornell.edu/research/honors)

**Timeline** *(Actual dates published at the beginning of fall semester):*

1. **Application for Admission:** Application for admission and a 1-2 page research proposal are due via online submission by **Friday, June 1, 2018**. Students are informed that their application is accepted and are assigned an honors research group at the beginning of fall semester.

2. **Thesis Progress Report:** A progress report of the thesis must be submitted to your Honors Group Leader in **October 2018**. The honors program will provide the template for this progress report in which you will give a brief summary of your research question, experiments completed to date, and future experiments. Also included is an annotated bibliography of three to five relevant papers.

3. **Late Fall-Early Winter Mandatory Meeting with Group Leader:** Each honors group will meet with their group leader at which time candidates will give a brief, informal presentation of their research project and the group leader will talk about expectations for the thesis.

4. **Completing the Honors Program Information Session** *(MANDATORY FOR ALL HONORS CANDIDATES):* Students must attend this info. session in **February 2019** *(May grads.)*
December 2018 graduates will meet separately with Colleen Kearns. Please contact Kristy Long (kll25) in the fall to schedule.

5. **Thesis Submission to Research Supervisor:** We encourage May graduates to submit a working copy of your thesis to your honors research supervisor for evaluation *just before Spring Break*. December graduates will identify individual timelines with their thesis supervisor and group leader.

6. **Formal Thesis Submission to Honors Group Leader:** For the groups doing a *thesis by review*, the completed thesis is formally submitted to the Honors Group Leader by **mid-April 2019 (May grads)**. It is this version of the thesis that is evaluated for acceptance by the committee after the review process. **Data collection and analysis, for the purpose of the thesis, must be completed by this point.** For groups doing *thesis by committee*, you will circulate a high quality, working copy of your thesis on the same timeline (**mid-April 2019**). Data collection and analysis, for the purpose of the thesis, must be completed by this point. After your committee meeting, you will have a chance to incorporate feedback. See more in No. 8 below.

7. **For Thesis by Review Groups:** Two anonymous biology faculty reviewers will review the thesis. The committee will consider the reviews when your thesis is evaluated for acceptance in May. You will receive the reviews in early May and have a chance to make changes based on reviewer comments.

8. **For Thesis by Committee Groups:** You will schedule a thesis committee meeting in late April or early May (before classes end) to present the results of your research and receive feedback on your manuscript. You will have a chance to incorporate committee feedback before formally submitting your thesis by the end of finals.

9. **Research Supervisor Feedback:** The research supervisor will submit an evaluation of the thesis to the Honors Group Leader. The evaluation will include an assessment of the significance of the problem, the particular accomplishments of the student in solving the problem, and the quality of the thesis.

10. **Thesis Revisions:** Candidates have a chance to revise their thesis based on reviewer comments or thesis committee feedback. If the reviewers/committee suggest revisions, the Honors candidate, in consultation with their thesis advisor, must consider these suggestions and submit a letter to the Honors Research Group Leader addressing the recommended revisions.

11. **Final Submission:** Candidates submit their final revised thesis through Turnitin on Blackboard. Students will be notified of their level of honors in late May.

**Honors Presentations**
All Honors candidates will give a public presentation on their thesis research at the end of the spring semester. The presentation will be either at a scientific poster session or a 10-minute talk in a department seminar. Dates of presentations will be announced in spring semester.
Level of Honors
Recommendation to the faculty that a candidate graduate with Latin Honors (Arts & Sciences) or Distinction in Research (CALS) is the responsibility of the Honors Faculty Committee. The quality of the thesis, as judged by the reviewers/committee and the Honors group leader, along with the candidate’s grade point average will determine the level of Latin Honors awarded to students in the College of Arts & Sciences. Students in CALS will receive Distinction in Research on their diploma. CALS Latin Honors is awarded separately by the college based strictly on GPA.

Resources for Honors Candidates
One tremendous resource for undergraduate scientists preparing to do Honors research is the Mann Library Guide on Research in the Biological and Life Sciences: A Guide for Undergraduate Honors Students (http://guides.library.cornell.edu/biologyundergrads). You will find tips for science citation management (Mendeley and Endnote) and data management. See also the "Locating Theses" tab to direct you to published undergraduate honors theses on eCommons, the Cornell University Library public database.