

NBB Honors Packet 2018-2019

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NEW NBB HONORS STUDENTS – tips, goals & requirements

Being an NBB honors student is an amazing accomplishment and a very special opportunity – congratulations and welcome to the program. You are not just having a research experience, not just building a relationship with your mentor, and not just writing a report. You are creating a tailored, unique, high-level, capstone experience for your college career. To get the most out of the Honors experience, keep these tips in mind:

1. Build a strong relationship with your mentor. Key components include:
 - a. Communication. Work together to discuss and agree upon expectations including TIME requirements in the lab and FEEDBACK mechanisms (e.g. weekly or bi-weekly meetings, lab meeting presentations, etc.). ASK questions.
 - b. Reliability. Do what you say you'll do.
 - c. Respect. Respect your advisor, both the faculty advisor and your day-to-day advisor, by asking what they expect. Make sure to give them both time to review your work, give them ample time to meet Honors and NBB requirements. They have a lot of responsibilities, one of which is mentoring you, so be sure to respect their time and their many roles.
2. Build independence. Key components include:
 - a. Literature research. Your advisors will give you articles, but you should also work to find new and related work on your own – bring the ideas from these articles into your discussions – SHOW and DEMONSTRATE your independent thoughts and enthusiasm.
 - b. Write excellent drafts. Although most of our work in the sciences is co-authored and it is unprofessional to turn in anything that your advisors have not approved, you should still be the primary author of any Honors documents. The work your advisors read should never be your first draft- work with peers, writing center editors, and work hard to always show them your best efforts.
3. Practice communicating about your Honors experience. Your Honors work will only help you in the future in as much as you can tell others about it. Key components include:
 - a. Reflect on your experiences – don't simply follow directions and check boxes. What are you really learning about the science and about yourself? Journaling can help you find succinct examples to use in interviews and applications – Examples of how you've overcome adversity? Examples of how you used critical thinking skills to solve a problem? Examples of your passion for a field? You may forget moments and you may not realize what they can represent until much later in your process, journaling and writing about things that happen can help you reach back for great examples to use in the future.
 - b. Talk to a variety of audiences about your work. Talk to other Honors students, talk to your family, talk to your roommates, present posters, present in lab meetings, etc. Ask them to ask you questions and practice explaining the science and what you're learning to audiences with different motivations for listening.
 - c. Write about your experiences. Your NBB Honors proposal, your committee reports, your thesis, your poster will all help you hone your written communication skills. This is hugely important for future jobs, careers, and

opportunities. Work hard to get better with each try. Save examples of your writing to show to future evaluators.

4. Keep in touch with Dr. Roesch. Wondering if you're experiencing something weird? Not sure how to handle something? Did you get a strange response when you thought you knew how to handle something? Dr. Roesch is the Director of Undergraduate Research in NBB for a reason – more than 10 years of working with undergraduates in research at Emory...Run it by her.

First Semester NBB HONORS STUDENTS – tips & goals

1. You MUST be registered for NBB495A by the end of add/drop/swap.
 - a. Remember that you must average at least 3 hours/week on the project for each credit (e.g. 12+ hours/week for 4 credits).
2. Write and submit a strong and thoughtful Honors Project Proposal.
 - a. The 2018 deadline is 11:59 pm Oct 12th. You must submit, via Canvas, a PDF signed by your research mentor.
 - b. You are the primary author, but your research mentor must approve your work as he/she is responsible for mentoring you and the science you produce. Plan ahead to get drafts to your mentor well before the NBB deadline.
 - c. The report must be 3-5 pages, 1 in. margins, 12 pt font, 1.5 line spacing and include sections on: Background/Introduction, Clearly stated hypothesis or research question, Basic methods, Timeline of major goals, Expected results/current data, and Cited research.
3. Attend a mandatory College Honors meeting.
 - a. Watch carefully for emails with details. 2016 dates/times were: 9/19, 9/28, 10/4 all 4:00-5:00 pm.
4. Form your thesis committee and submit the committee declaration form to NBB.
 - a. You must have at least 3 voting committee members (Emory Faculty members): There must be at least two NBB program members from different departments and at least one non-NBB program member. Non-Emory faculty are allowed, but they cannot vote.
 - b. Your committee declaration form is due via Canvas by 11:59 pm on Oct 26th.
 - c. You will also need to report this committee to the College at some point. Watch for emails.
5. Plan to take your Graduate level course if you've not already done so.
 - a. If the class is three or four credits, it can fulfill an NBB Program elective course requirement, assuming that your NBB academic advisor feels it has appropriate NBB content.
 - b. A two-credit course or more will fulfill the Honors requirement.
 - c. The graduate course must be taken for a letter grade, and you must earn a C or higher.
 - d. You must have the permission of the instructor to register for the course – it is also a good idea to discuss the course with the instructor before you ask permission to enroll.
6. Keep your GPA at 3.50 or better.

7. Schedule your Honors Thesis Progress report by December 7th.
 - a. It must be SCHEDULED by 11:59 pm on 12/7 but must OCCUR by 11:59 pm on Feb 1.
 - b. The progress report meeting should be scheduled for about 1 hour. The student should plan a ~15 min oral presentation based on the written proposal document including a brief overview, updates, recent data, and plans for completion. The committee should use this time to help prepare and guide the students in their final thesis work.

8. Actively participate and contribute to the 499/495 course meetings.

Please note: Failure to meet ANY of the above requirements is grounds for being DROPPED from the NBB Honors Program and/or earning a low grade in NBB495A.

Second Semester NBB HONORS STUDENTS – tips & goals

Second semester of honors is generally a huge effort in time and stress management. Deadlines come fast and you will need to be diligent to stay on track.

Second semester goals and requirements:

1. You MUST be registered for at least 1 credit of NBB495BW by the end of add/drop/swap.
 - a. Remember that you must average at least 3 hours/week on the project for each credit (e.g. 12+ hours/week for 4 credits).
 - b. There is an unusual rule that allows for you to take only 1 credit, which is helpful if you plan to underload and pay by the credit. However, you will need to work on your thesis for at least 12 hours/week in order to be successful.
2. At the very beginning of the semester, you should meet with your research advisor and discuss all of the details of your project with a specific focus on the STRICT timeline for completing an honors thesis.
3. Based on the early and comprehensive meeting with your research advisor, revise your original proposal into a written Progress Report.
 - a. The report must be 3-5 pages, 1 in. margins, 12 pt font, 1.5 line spacing and include sections on: Background/Introduction, Clearly stated hypothesis or research question, Basic methods, Timeline of major goals, Expected results/current data, interpretation/assessment of current data, and Cited research.
 - b. Prepare to discuss changes from original proposal with your committee, the 499/495 class and Dr. Roesch.
4. Share your written progress report with your committee BEFORE your progress report meeting.
 - a. The meeting must OCCUR by 11:59 pm on Feb 1st.
 - b. The progress report meeting should be scheduled for about 1 hour. The student should plan a ~15 min oral presentation based on the written proposal document including a brief overview, updates, recent data, and plans for

completion. The committee should use this time to help prepare and guide the students in their final thesis work.

- c. This meeting is an excellent time to discuss defense scheduling. Plan a 90 min block of time for the defense.
 - d. Submit the written progress report and the progress report meeting form to NBB via Canvas by 11:59 pm on February 8th.
5. Schedule your defense to OCCUR before April 2, 2019.
 - a. The progress report meeting is a great time to confirm when your committee members are available for the defense (schedule a 90 min block).
 6. Send your thesis to your committee (and Dr. Roesch) at least ONE WEEK before your defense.
 - a. Confirm with your committee how they'd like to receive your completed written thesis. Usually, committee members prefer electronic documents, but offer to print it out (for free at the NBB office) and deliver it if anyone prefers a hardcopy.
 7. Immediately after your oral defense,
 - a. Submit a copy of your Thesis Exam Report to NBB via Canvas by 11:59 pm on April 5th.
 - b. Work on any changes/additions to the written document that your committee requires.
 8. Submit your FINAL written thesis via the College Honors Program directions by NOON on Tuesday April 9th, 2019.
 9. Submit all other forms required by the College Honors Program directly to OUE by April 11th, 2019.
 10. Present your NBB honors poster at the NBB undergraduate research symposium on Monday April 24th from 3-6 pm.
 11. Participate in the College Honors Ceremony on Sunday May 12th.
 - a. Be sure to confirm with your Faculty mentor that he/she will be able to attend the ceremony.
 - b. Dr. Roesch or a committee member can fill in for your mentor at the ceremony, but we need to know in advance.

Please note: Failure to meet ANY of the above requirements is grounds for being DROPPED from the NBB Honors Program and/or earning a low grade in NBB495BW.

Tips for the oral defense-

You may have a public portion of your defense where friends, colleagues, labmates, etc. attend your oral presentation. The presentation should last about 20-30 minutes and should be well practiced, thorough, and smoothly delivered. During this time, the 'public' (and not your committee members) is expected to ask you questions. Once the 'public' is satisfied, everyone leaves the room except you and your committee (it is appropriate for your direct, day-to-day mentor to stay for the 'closed' portion of your examination at the discretion of your Faculty research mentor). During this 'closed' session, your committee will ask you question about your oral presentation and your written document. Once your committee members are satisfied,

you will be asked to leave the room for the entire committee to deliberate and vote on your level of honors (day-to-day mentors not official on your thesis committee will not technically vote, but may contribute to the discussion). Once the committee is finished deliberating, you will be welcomed back into the room for final discussion of the committee's decision (and often celebrations!).

The committee awards the degrees of Honors (Honors, High Honors, Highest Honors). In the NBB Program Highest Honors is usually restricted to a thesis that contains data that is rigorous enough for publication. For example, high-quality, thoroughly-tested, yet negative results are, unfortunately, not often published in many fields, but this should not preclude a student from earning Highest Honors. Further, if the data are strong enough to be included in a publication, but not themselves enough data for an entire publication, the thesis may also be considered for highest honors. A rubric to guide discussion for degree of honors is currently under consideration by the College Honors Committee (2018).

New NBB Faculty Research Mentors

Thank you for your support of NBB undergraduate

The NBB undergraduate major designed as an interdisciplinary major wherein students are required to take a set of courses from Biology, Chemistry, Psychology, Anthropology and specially-developed NBB courses.

The program offers specific courses which students can earn academic credit for working in research with a member of the Emory faculty:

For each course credit, the student is expected to work on the project an average minimum of 3 hours/week.

- **NBB 399** is designed for students just familiarizing themselves with the research questions and techniques. It may be taken for as few as 1 credit (3 hours/week) and as many as 4 credits (12 hours/week). Much time shadowing, rotating through projects and reading the literature are totally appropriate activities for this course. The student's grade in the course will be entirely dependent on whether he/she has met the goals and expectations you have set for the work. You are encouraged to evaluate the student primarily on effort rather than delivery of results.
- **NBB 499** is designed for students who are more-or-less 'up and running' and gaining independence on a specific research project. Although there are no pre-requisites for this course, students are expected to be familiar with the project and techniques before the semester starts so they will be able to ramp up productivity and independence quickly during the semester. NBB499 may be taken for 3-4 credits per semester (9-12 hours/week minimum) and can be repeated for up to 8 total credits. NBB499 students should be working on a specific research question with growing independence and responsibility. NBB499 students will attend regular meetings with other students in NBB499, write a research proposal and/or research report each semester, and present a poster in the NBB symposium at the end of the spring semester. The student's grade in

the course will be largely dependent on whether he/she has met the goals and expectations you have set for the work, but meeting the basic requirements for the regular course meetings will also be considered in the grade. You are encouraged to evaluate the student primarily on effort and intellectual contribution rather than delivery of results.

- **NBB495** is the course supporting the **NBB Honors Program**. Honors students must be in their final two semesters in the College, have at least a 3.50 overall GPA, and meet a number of requirements throughout the two-semester program. More details about the program are in the **NBB Honors Packet**. In general, these students should be highly independent and making significant intellectual contributions to the research. NBB495 students will attend regular meetings with other students in NBB495, they will form a thesis committee, report on progress, write and defend a thesis, and present a poster in the NBB symposium at the end of the spring semester. You will grade the student's work each semester as well as chair the thesis committee, which will determine the student's level of honors (highest honors, high honors, or honors).

It is totally appropriate for the student to have a day-to-day mentor who is not the Faculty advisor. However, the Faculty advisor will be responsible for the student's experience and will be required to sign off on the student's application for credit and all grade reports.

There are no NBB-major specific funds set aside to support the student's work on the research projects, but please consider the following details about funding:

- Students may not earn an hourly wage for the same hours counted toward academic credits (e.g. Federal Work-Study and IMSD hours must be separated from NBB499 hours).
- Students may accept merit-based awards or scholarships related to performance in research (e.g. Beckman Scholars, Computational Neuroscience Training Grant, Petit Scholars, etc.).
- Students may apply for grant funding for research supplies through the SIRE Grants program. See: <http://college.emory.edu/home/academic/research/sire/grants/>
- You may be able to apply for supplemental funding to support your undergraduate researchers on your existing NSF or NIH grants. Check with your program officers and/or the office of Dean Ron Calabrese:
<http://college.emory.edu/home/administration/office/dean/#research-assoc-dean>

Finally, be sure to use me for any questions, concerns or thoughts about undergraduate research. As Director of Undergraduate Research for the NBB program, it is my job to help facilitate your work with our students – please keep in touch. I can be reached at leah.roesch@emory.edu.

NBB HONORS PROGRESS REPORT FORM 2019

Submit the written progress report and the progress report meeting form to NBB via Canvas by 11:59 pm on February 8th.

Research advisors and committee members should sign the form after the student presents an oral progress report to the committee. Please neatly print or type the names and department for each of the committee members.

SIGNATURE indicates that the committee members feel that the student is on track to successfully defend the thesis by April 2nd 2019.

Student's Name: _____

Advisor's Name and Dept.: _____

Committee Member(s)/Department(s): _____

The student, in consultation with his/her research advisor, should briefly outline the additional work that the committee feels must be completed prior to the final defense:

HONORS EXAMINATION REPORT 2019

Please print neatly or type – the report will not be accepted if illegible

Submit a scan of this Exam Report to NBB via Canvas by 11:59 pm on April 5th. Hardcopy of this form is due to OUE by April 11th at noon.

Name _____ Student ID #: (7 digits) _____

Major of honors work: Neuroscience & Behavioral Biology

Degree of Honors: (Check only one) _____ Highest Honors

_____ High Honors

_____ Honors

Title of Thesis: _____

Committee: (Please print or type names here-NO signatures. Initial by printed name.)

(1) _____ Dept./Program _____
(Adviser)

(2) _____ Dept./Program _____

(3) _____ Dept./Program _____

(4) _____ Dept./Program _____

Signed** : _____ Date _____
(Thesis Advisor, Department/Program Honors Coordinator, or Department/Program Chair)

NBB 495 Grade Report

These questions will be emailed to all Faculty Research Mentors and the students' grades will be received via email directly to Dr. Roesch.

Faculty mentors must complete this form for every semester of NBB495.

To the 495 Supervisors:

Please rate your student's performance this semester, following these guidelines:

(+/- These can be added to any grade except two: there is no A+, and no D-.)

- A The student was self-motivated, able to work independently, knowledgeable about the project, worked hard.
- B The student was self-motivated, needed some help at every step, worked the agreed number of hours, showed some weakness in understanding the issues involved.
- C The student needed help at every step, showed definite lack of understanding of the issues involved, but did work the hours agreed upon (or close to it).
- D The student was not motivated, was not able to work independently, was not knowledgeable, worked not all the hours agreed upon but greater than 50% effort, did progress somewhat during the term and did perform some work.
- F The student did not put in much effort at all, and obtained not results. The student did not improved during the semester.

Additional Comments:

TO BE COMPLETED BY THE SUPERVISOR:

STUDENT NAME: _____

RECOMMENDED GRADE: _____