

SENIOR THESIS HANDBOOK
for candidates for
the **HONORS DEGREE WITH DISTINCTION**
and
DEGREE WITH DISTINCTION

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Board of Senior Thesis Readers
and the
Undergraduate Research Program

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Information for Prospective Senior Thesis Writers

WHAT IS A SENIOR THESIS?

Resting on book shelves, senior theses all look quite alike: they appear to just be ordinary books with a page size of 8 1/2 x 11 inches. Inside their bindings, however, these works differ markedly from one another according to the field for which they were prepared. Theses in the humanities and the more humanistic social sciences, for instance, consist primarily of written words; although they may include graphs or images, their essence is in the words that their author created. Theses in engineering and science disciplines, on the other hand, may contain far fewer pages and focus on the numbers and symbols of equations, tables, and graphs. The essence of these theses lies in data experimentally achieved and mathematically analyzed; while words are necessary aids to explaining the significance of the work accomplished, the text is not the primary focus of the work.

In the fields of art and design, the pages bound between covers of the senior thesis are even further removed from the essence, since it is ordinarily but a replica of the actual work. Since these theses consist wholly of artwork, they only house visual reproductions (slides and/or prints) of the artist's original shapes and images: the primary viewing place is the art gallery or other exhibit location. Although the reproduced images must be of good quality and be accompanied by text from the artist that assists a viewer's understanding of the history, context, and significance of these works for their creator, the words do not constitute the heart of the thesis, which lies in the creative product itself.

With all this variety, then, what do senior theses have in common? What makes it sensible to designate their creators as candidates in the same university-wide degree program? The answer lies in the academic community's expectation that each senior thesis candidate will attempt to cross the line that divides student from teacher and join the community of creators, whether in the arts, sciences, humanities, engineering, or any other field of endeavor. Prepared under the close supervision of a faculty thesis director, a senior thesis presents the result of a major, independent research or creative project. Unlike most term projects, papers and lab reports written in undergraduate courses, senior theses address questions or issues for which no known or generally accepted answers exist. The goal of the thesis is to contribute something original and valuable to the scholarly, scientific, and/or artistic community by attempting to decipher these important, unanswered questions.

Senior thesis writers must think independently and creatively in order to successfully design and carry out the exploration of their hypotheses. They must exercise good judgment in analyzing the results of their experimentation or work with primary materials, and they must bring together a synthesis of existing information and theory to bear on their own experimental, analytical, or creative results. The length of a senior thesis varies according to the discipline for which it is prepared:

- Humanities or social science theses are typically 50 pages long; however, they have been known to range to 200-300 pages;
- Quantitative sciences and engineering theses are typically shorter;
- Fine and performing arts theses take the form of portfolios or performances, with brief supporting written materials.

It is important to review a number of theses in your own and related disciplines before beginning a senior thesis project, as this review will give you a good sense of the scope of a senior thesis project in your area. Sample theses are available online through the University's institutional repository (<http://dspace.udel.edu:8080/dspace/handle/19716/4234>). Additional examples are available in the Undergraduate Research Office (180 South College Ave) and at the University Archives, room 002, Pearson Hall basement. Master's theses also provide good models and can be found at the University Library.

STUDENTS WITH DOUBLE MAJORS, OR WHO WANT TO WRITE A THESIS OUTSIDE THEIR MAJOR

Though many students have double majors, the nature of research normally demands that a student choose one major in which to attempt the thesis. An exception would be the student who is planning a fifth year to complete the second thesis. Students who are considering completing two theses must schedule an appointment with Meg Meiman, (meiman@udel.edu), Christine Yacyshyn (christineyak@gmail.com) or Joe Stanley (jstanley@udel.edu) in the Undergraduate Research Office, to discuss their plans.

If you wish to do a Senior Thesis for Distinction in a field other than your major, you must request the permission of the Board of Senior Thesis Readers. Before requesting the Board's permission, you must schedule an appointment with Meg Meiman (meiman@udel.edu) to discuss your plan.

WHAT IS A DEGREE WITH DISTINCTION?

The term "Distinction" is included in a baccalaureate degree title when the recipient has conducted original research or creative work, written a senior thesis or produced a creative project and successfully defended the work before a committee of University faculty. The University of Delaware offers Degrees with Distinction (DWD) to students who successfully defend a Senior Thesis and who meet all of the requirements listed below. To graduate with Distinction is to graduate with a different kind of degree (e.g., a Bachelor of Arts in Anthropology with Distinction). Students who wish to write a thesis but who may not meet the requirements for a Degree with Distinction are also highly encouraged to complete a Senior Thesis.

For Honors students who successfully create and defend a Senior Thesis, it is possible to graduate with an Honors Degree with Distinction (HDWD). The HDWD recognizes a student's completion of the research requirements for the Degree with Distinction in addition to the successful completion of 30 credits in Honors courses through the degree program. The Honors Degree with Distinction is listed on each student's University of Delaware official transcript. All requirements for the HDWD are also listed below.

REQUIREMENTS FOR DISTINCTION

Requirements for the Degree with Distinction (DWD)

In addition to preparing a thesis that demonstrates synthesis, judgment, creativity, and independent thinking, a candidate for the DWD must meet the following requirements:

- A. At the time of graduation, the candidate's University of Delaware cumulative grade point index must be at least 3.0, and the index in the major must be at least 3.5. At the request of the candidate, and with permission of the major department, senior thesis credits can be computed toward the major index.
- B. Candidates are required to register for UNIV-401-010 and UNIV-402-010 in successive semesters and attend all class meetings.
- C. Candidates complete six (6) credits of thesis or project work during their final two semesters and give a formal oral presentation and defense of the thesis to all of their committee members.

Requirements for the Honors Degree with Distinction (HDWD)

In addition to preparing a thesis that demonstrates synthesis, judgment, creativity, and independent thinking, a candidate for the HDWD must meet the following requirements:

- A. University of Delaware cumulative grade-point index of at least 3.400 at the time of graduation.
- B. Six credits of Honors thesis or project (UNIV 401/402) and the successful oral presentation and defense of an acceptable thesis or project to a committee of faculty approved by the major department and the University Honors Program
- C. Completion of any additional specifications for the thesis or project set by the major department
- D. Honors coursework counting toward the Honors Degree with Distinction cannot be taken Pass-Fail unless the course is only offered Pass-Fail.

Note: Six credits of Honors thesis may be counted as part of the 30 Honors credits required for the Honors Degree. If taken for 3 credits, UNIV 402 satisfies the senior capstone.

The [Honors Degree Application Form](#) must be submitted to the University Honors Program **by May 15 of the junior year**, i.e., the year before the year in which the candidate will graduate.

WHY UNDERTAKE A THESIS?

The Senior Thesis program allows you to explore your aptitude for research within a more extended and individualized framework than that generally afforded by courses. It deepens your participation in the University's community of scholars through your close contact with your thesis director and committee members, other interested faculty, graduate and postdoctoral students, and fellow undergraduate researchers. As the most widely recognized and respected hallmark of undergraduate distinction, the Senior Thesis demonstrates to graduate schools, fellowship committees, and employers your intellectual achievement and sophistication as well as your initiative and self discipline. As the capstone of your undergraduate experience, the Senior Thesis provides you with the opportunity to draw upon everything you have learned in your college experience and make a significant contribution of your own.

PROGRAM ADMINISTRATION

The Honors Degree with Distinction and the Degree with Distinction are administered by the Board of Senior Thesis Readers. These are faculty who conduct the senior thesis course, UNIV 401/402, and who serve as third readers for senior theses candidates. Board members for the year are listed below:

2010-2011 Board of Senior Thesis Readers

Lynnette Overby, Faculty Director of Undergraduate Research (overbyl@udel.edu)

Janice Bibik, Health, Nutrition, & Exercise Sciences (pirwet@udel.edu)

Jan Blits, Education and Political Science (jblits@udel.edu)

Matt Decamp, Physics & Astronomy (mdecamp@udel.edu)

Nicole Donofrio, Plant & Soil Science (ndonof@udel.edu)

Marlene Emara, Animal and Food Sciences (emara@udel.edu)

Pak-Wing Fok, Mathematical Sciences (pakwing@math.udel.edu)

James Glancey, Bioresources Engineering (jglancey@udel.edu)

Susan Groh, Chemistry and Biochemistry (sgroh@udel.edu)

Rolf Joerger, Animal and Food Sciences (rjoerger@udel.edu)

Victor Kaliakin, Civil Engineering (kaliakin@ce.udel.edu)

Kalmia Kniel, Animal and Food Sciences (kniel@udel.edu)

Susan McKenna, Foreign Languages & Literatures (smckenna@udel.edu)

Tony Middlebrooks, Urban Affairs & Public Policy (tmiddleb@udel.edu)

Chad Nelson, Plant & Soil Science (cnel@udel.edu)

Leslie Reidel, Theatre (lreidel@UDel.Edu)

Eric Rise, Criminal Justice (erise@udel.edu)

Chris Williams, Entomology & Wildlife Ecology (ckwillia@udel.edu)

Danilo Yanich, School of Urban Affairs (dyanich@udel.edu)

The Undergraduate Research Program staff members assist the Board of Senior Thesis Readers by coordinating activities and providing advisement to thesis candidates:

Lynette Overby, Faculty Director of Undergraduate Research (overbyl@udel.edu)

Meg Meiman, Coordinator of Undergraduate Research (meiman@udel.edu)

Christine Yacyshyn, Undergraduate Research Graduate Assistant (christineyak@gmail.com)

Joe Stanley, URP/OSL Graduate Assistant (jstanley@udel.edu)

Satyajeet Ballurkar, Undergraduate Research Graduate Assistant (satyajit@udel.edu)

The Board of Senior Thesis Readers administers policy concerning senior theses on behalf of the University Honors Program, Elliott Hall, and the University Committee on Student and Faculty Honors (UCSFH).

Questions concerning the senior thesis program should be addressed to the following address:

Undergraduate Research Office

180 South College Ave

(302) 831-8995

UndergradResearch@udel.edu

YOUR SENIOR THESIS COMMITTEE

All work pertaining to your Senior Thesis will be conducted under the guidance and advice of three faculty members who will make up your Thesis Committee. Only faculty members at the University of Delaware can serve on your thesis committee, though you may end up receiving help and advice from other individuals, such as graduate students. It is possible to have more than three members on your committee: non-faculty with appropriate research expertise can serve as co-directors or additional readers at the discretion of the candidate's major department. You will be working most closely with your Thesis Director, but you will also receive input from your Second and Third Readers. **You will need to select your Thesis Director and Second Reader *before* you submit your application;** your Third Reader, however, will be assigned for you upon acceptance to the program.

Your Thesis Director

Your thesis director (also known as your thesis advisor or first reader) will oversee your project from its inception to its final form and will be your primary resource person for matters of substance, organization, and presentation. Obviously, your selection of a thesis director is an important one, perhaps as important as your choice of the topic itself, and the decision must be made prior to submitting your application (usually during your Junior year). In making a decision, consider both a professor's expertise and his/her interest in your research topic.

Your thesis director's general responsibilities include

- Steering you to a topic that will involve original research and to readings that are current, seminal, and representative of your topic;
- Helping you to obtain necessary supplies and equipment;
- Providing training in needed techniques;
- Providing continuous guidance with procedures and the research schedule to ensure the quality and timely completion of your project.

Additional specific responsibilities include

- Maintaining familiarity with the senior thesis program requirements and attending the orientation meeting for new directors of senior theses;
- Working with you to develop a proposal;
- Obtaining approval from the Human Subjects Review Board (if using human subjects);
- Helping you to select your second reader;
- Being present on campus while you complete your thesis;
- Arranging with you an appropriate number of contact hours per week while you are enrolled in UNIV-401 and UNIV-402;
- Reviewing and commenting on your regularly written progress reports and drafts of the thesis;
- Acting as moderator for the oral defense of the thesis;
- Submitting an "S" grade at the end of the first semester;
- Submitting final grades for both UNIV-401 and UNIV-402 after the defense of the thesis.

Co-Directors: It is possible for a team of two faculty members to jointly direct a thesis. If your thesis does have co-directors, you will still need to select another faculty member to serve as "second" reader. In this case, your thesis committee will have four members.

Your Second Reader

The second reader is usually a member of your major department with research expertise in the area of your thesis. This reader is selected by you in consultation with your thesis director and must be chosen before you submit your senior thesis proposal (usually during your Junior year).

Your second reader should offer comments as you revise your proposal early in the fall semester and will then approve it. Your second reader will also review and approve your written progress report. You should submit a draft of each chapter of the thesis as you write it during the winter and spring terms. This way, you can take the second reader's suggestions for revision into account during your research process.

Finally, the second reader will read a final draft of the thesis, prepare questions and attend the defense.

Your Third Reader

The third reader is someone who represents the University at large, is **not** a member of the thesis writer's major department, and is not ordinarily an expert in the research field of the thesis. Third readers are selected from the members of the Board of Senior Thesis Readers. However, you do not have to choose a Third Reader: instead, they will be selected for you after you are accepted to the program. Each Board member serves as third reader for 4-5 thesis candidates who meet as a group twice each semester with their third reader to discuss on-going research. Your third reader will also review and approve your proposal and progress report.

Finally, the third reader will read a final draft of the thesis, prepare questions, attend the defense, and fill out and submit the Third Reader Defense Report Form to the Undergraduate Research Office (URO).

HOW TO PREPARE BEFORE SENIOR YEAR

Preparation for your senior thesis can begin in your sophomore year as you explore potential topics of interest through course papers and individual reading, research skills courses (if offered in your major department), and/or through undergraduate research with a faculty mentor. This early start will enable you to select courses in your junior and senior years which are related to your research needs. To survey the research interests of faculty in your department, consult the Undergraduate Research Program website (<http://urp.udel.edu>), where there is a list of "Faculty Projects" under the "Research Opportunities" menu. You can also receive general advisement and referral to faculty by contacting the Undergraduate Research Office (URO) at 12 W. Delaware Ave., by calling (302) 831-8995, or by emailing UndergradResearch@udel.edu.

Junior Year Requirements

First semester – Junior year

You must identify a research topic and find a **faculty member to direct your thesis**. With the help of a committed sponsor, you will be able to establish a viable topic and potential methodologies for exploring it. You should make an appointment to see an advisor at the URO

to discuss senior thesis requirements and processes, as well as to receive an application and proposal materials.

Second semester – Junior year

You will identify your second reader and write your “Senior Thesis Proposal,” **due May 15 of the Junior year**. Your thesis director will recommend background work for you to begin before the fall of your senior year. If your research involves experimentation, you may want to remain on campus during the summer to begin the experimental work or to continue experimentation you have begun in a Junior year research apprenticeship. During Honors Weekend in early May, you are required to attend the Undergraduate Research Symposium, where seniors will be presenting summaries of their thesis work. You may also attend thesis defenses of students in your department in the spring of your junior year. Please contact the URO to request the times and locations of relevant defenses.

Human Subjects: Senior thesis candidates who intend to use people, either individually or in groups, for experimental purposes—whether these involve physical, chemical, electrical or psychological stimulation of responses within the body; interviewing or administration of surveys or questionnaires; or other techniques of measurement or evaluation—must obtain either approval or exemption from the University of Delaware Human Subjects Review Board **before** working with the subjects. Contact the URO for more information on the history of human subjects’ regulations and the process for requesting an exemption or expedited approval. You may also refer to page 18 of this handbook.

Summer between Junior and Senior year

This is a good time to do background work, literature reviews, experimentation, etc. If you will work on your project over the summer, you should consider applying for the Summer Undergraduate Research Fellowship: applications are due May 1. There may also be a summer Scholar Program available in your major (applications due March 1); look under “Summer Scholars” on the UR Program website: <http://urp.udel.edu/>

Planning Your Senior Year

Because you are conducting original research, that is, research whose results are as yet unknowable, you must anticipate equipment failures, delays in obtaining needed literature and other supplies, and inconclusive results requiring new or additional experimentation. Thus, you should begin with, and regularly update, **a clearly defined work schedule**. You will spend most of your time working on your thesis either alone or with your Thesis Director, and you will want to meet with your Thesis Director about once a week, and occasionally meet with your Second Reader. Be prepared to spend approximately 10-20 hours a week working on your thesis.

If your project involves experimentation, plan to complete the experiments in the **first semester** of your Senior year, leaving yourself time to retest over the Winter Session or early Spring semester if it becomes necessary. If your project is very demanding of literary resources, complete the bulk of your reading and assembling of information in the fall, leaving time in the winter and early spring terms for working out your analysis and writing the paper. All candidates should plan to get a considerable amount of thesis work done over the **Winter Session** even though they are not registered for thesis credits during that time. The thesis defense is scheduled for the last month of the spring semester, and the first draft is due in early April. You are strongly advised to leave your winter term free for full time thesis work: in particular, study abroad is **not** recommended during Winter Session of your Senior year.

Students completing degree requirements at times other than for a June commencement must adjust this timetable accordingly. Students planning to graduate in winter (often referred to as “winter graduates”), should refer to the Winter Graduate schedule, on pages 12-13 of this handbook and online at <http://urp.udel.edu>. Students spending **a semester abroad in their junior year** must also make many of these arrangements earlier than this timetable suggests.

HOW TO APPLY: APPLICATION PROCEDURES

To become a candidate for the Degree with Distinction or Honors Degree with Distinction, you must meet with a URO advisor and submit an application and thesis proposal.

Advisement: Schedule an appointment with an advisor in the Undergraduate Research Office (831-8995). The advisor will provide you with an overview of the thesis program and will work with you to determine how the program’s resources and requirements best fit your own needs and interests. At this meeting, you will receive information about preparing your proposal and be given the application form.

Application forms: The following forms must be submitted to the Undergraduate Research Office:

Degree with Distinction candidates:

- A. **Thesis Proposal (see below for detailed instructions).** The Thesis Proposal will be submitted online on the Undergraduate Research Program website under “Senior Thesis” > “Thesis System Login.” You must work closely with your thesis director and your second reader to write a 3-5 page proposal addressing research goals, significance to the field, methods, timetable, schedule of meetings with faculty, and budget. **IMPORTANT:** You must have the approval of your thesis director and second reader **BEFORE** you upload the proposal to the web form. Your thesis director and second reader will indicate their approval by signing the paper application.

By the end of the summer, your proposal will be sent to your Third Reader for approval. It is possible that your proposal may require revisions before it is fully approved.

Senior Thesis Application Form. Complete this paper form, available at the URO. Obtain the signatures of your thesis director and second reader (note that their signature on the application also indicates approval of your thesis proposal) as well as the department chair. Submit the form to the Undergraduate Research Office.

Honors Degree with Distinction candidates:

Honors Degree with Distinction candidates apply in two steps.

Step One: [Honors Degree Application form](#). Complete this form and submit to the University Honors Program by May 15 of your junior (third) year. **NOTE:** This form is required to graduate with an Honors degree, regardless of whether you complete a Senior Thesis or apply for an Honors Degree with Distinction.

Step Two: Senior Thesis Application and Proposal Form. Follow the directions outlined above in sections A and B. These two forms are used both for HDWD and DWD candidates.

Instructions for the Thesis Proposal

The proposal, written with the help of your thesis director, should be no more than five pages long and should answer the following questions:

Research Goal: Explain how the question you are investigating is important to your field; refer specifically to two or three scholars in the field whose work is relevant to your research question. How do you plan to build upon or qualify their conclusions? What is your own research goal?

Methods: What methods will you use to pursue this goal?

Bibliography: Include a preliminary bibliography of works you will consult.

Timetable: Outline your anticipated timetable *from June through May*, including calendar dates for progress you hope to achieve toward completion of as many of the following tasks as apply to your field of research: literature reviews, project design, data collection, analysis, and writing of the first draft of your thesis. **The first draft of your thesis will be due to your thesis director by the first week of April.** Indicate how much of the work, if any, you have already accomplished. If you plan to use the summer for substantial work on the thesis, provide a detailed timetable for June, July and August that includes your schedule of conferences with your thesis director during this period and explains what you hope to have accomplished by September 1.

Budget: Include your budget and sources of funding (even if zero). Consider costs such as photocopying, travel to libraries, and research materials. Information about **Financial Resources** is available on the next page; there might be funding you can apply for.

Human Subjects: If your project will be using human subjects, your thesis director must contact the Office of the Vice Provost for Research, to apply either for a review by the Human Subjects Review Board or for an exemption from the review. For more details, see page 17 in this handbook.

Internships and Student Teaching: If you will participate in an internship or be student teaching your senior year, you should include a description of the arrangements you have made to attend the senior thesis course meetings. Contact the URO prior to submission of the application with concerns.

Application Deadlines

Completed DWD and HDWD senior thesis applications and proposals are due by **May 15** of your junior (third) year. If you intend to graduate in fall semester, your application is due by **November 30** of your junior year.

Thesis Course Registration

DWD: You must register for **UNIV-401-010** and **UNIV-402-010** in successive semesters of your final baccalaureate (senior) year.

HDWD: You must register for **UNIV-401-080** and **UNIV-402-080** in successive semesters of your final baccalaureate (senior) year.

Be sure to register for the appropriate section (DWD = section 010, HDWD = section 080). Students wishing to register for senior thesis credits in a fashion other than stipulated (Fall and Spring, 3 credits each) must discuss their plan with an advisor in the URO and then write a letter to the Board of Thesis Readers requesting permission.

When you register for UNIV 401, you will be asked to select an instructor. This is your thesis director. If your director is not listed, contact Meg Meiman (meiman@udel.edu) with your name, the section and credits you wish to register for, and the name of your thesis director. If you have co-directors, only one will be responsible for assigning you a grade for UNIV 401 and 402, and this is the faculty which should be listed as the instructor.

An Introduction to the Senior Thesis Course

Registration for UNIV 401/402 reserves a weekly class meeting time. Four mandatory meetings and four optional workshops are scheduled in the fall. Including the Senior Thesis Symposium, five mandatory meetings and two optional workshops are scheduled in the spring. Registration in UNIV 401/402 reserved a meeting time on Monday from 3:30 to 5:30, and all sessions meet at this time *except for* alternate sessions, scheduled on Wednesdays or Thursdays, and the Senior Thesis Symposium held on Saturday. The class does not require any outside work (other than the completion of your thesis!), and is designed to provide you with valuable, relevant information that you would have trouble finding elsewhere.

Each semester begins with an Orientation Meeting, where you will meet with your Third Reader and the other students who are writing a Senior Thesis. Other classes will cover techniques to organize your research, formatting and defending your thesis, and other topics beneficial to the process of completing a Senior Thesis. There will be several days of Research Presentations, where you will have an opportunity to practice your presentation skills in front of your peers. For a full description of UNIV 401/402, including deadlines related to your thesis, please see the section "UNIV 401 & 402: The Senior Thesis Course," on page 12.

FINANCIAL RESOURCES

In addition to financial support that may be available through your thesis director, several forms of aid are available to students writing senior theses:

1. All juniors working on research projects leading to the senior thesis may apply to the Undergraduate Research Program for a "Summer Undergraduate Research Fellowship" of up to \$1500. These awards are designed to free time for research over the summer before the senior year. They may not provide full support but are intended to encourage the student to seek the necessary remaining funding. Application deadline is early March (see the URO website for the exact deadline).
2. Significant fellowship support is available on a competitive basis to **juniors** who are senior thesis candidates in biology, chemistry, allied health, art, all humanities departments, all social science departments, all departments of the College of Education, and in the Center for

Composite Materials. For more in-depth information, see the “Funding” section of the URP website and check with your department. Application deadlines are in March.

3. For each semester enrolled in UNIV-401 or UNIV-402, students writing theses can apply to the URO for undergraduate research Supply & Expense Grants designed to defray research expenses up to \$250. This includes the cost of printing posters for presenting at events such as the Senior Thesis Symposium in May. Application deadlines are October 1 and February 25, and can be found online at <http://urp.udel.edu/financial/Default.aspx>.
4. Alumni Enrichment Awards provide up to \$2000 for students participating in academic competitions, research, and other academic endeavors. For more about these awards, visit their website: <http://www.udconnection.com/alumni-enrichment-awards>

Applications for all types of funding are available in the URO or in the appropriate department. The Undergraduate Research Office also provides small stipends for students with demonstrated financial need. For more questions about this, please contact Meg Meiman at (302) 831-8744 or meiman@udel.edu.

Information for Current Senior Thesis Writers

Once you have submitted your proposal and application for a Senior Thesis, you should begin your work on your thesis under the assumption that you will be accepted into the program. If there are any concerns about your proposal, you will be contacted and asked to revise and re-submit it.

There are no other requirements until the first class meeting of UNIV 401 is held at the beginning of the Fall semester, although many students spend all or part of the summer working on their thesis.

UNIV 401 & 402: THE SENIOR THESIS COURSE

Enrollment in UNIV 401/402 is contingent upon acceptance as a candidate for the Honors Degree with Distinction or the Degree with Distinction. Fall graduates should make an appointment with an Undergraduate Research office advisor to discuss how their thesis plans fit into the thesis course schedule. Enrollment in UNIV 402 is contingent upon satisfactory completion of UNIV 401.

Meeting times: Two mandatory meetings and several optional workshops are scheduled in the fall and spring. Registration in UNIV 401/402 reserved a meeting time on Monday from 3:30 to 5:30, and all sessions meet at this time *except for* alternate sessions, scheduled on other days, and the Senior Thesis Symposium held on Saturday, May 8.

Attendance: Unless otherwise stated, attendance at all sessions is **required**. Attendance at the session on Preparing a Research Presentation is required unless the student has already presented research at a public event through one of the following UD programs: Arts, Humanities, Social Science, Science, Engineering, HHMI, CHEP, or McNair Scholars. **NOTE:** An unexcused absence from a research group meeting may result in the lowering of your grade for UNIV-401 by half of a grade point. (Contact the Undergraduate Research Office--831-8995--immediately if you are forced to miss a required session.)

Syllabus for Fall Semester (10F)

September 13: **Orientation Meeting and Research Group Assignments (required)**

Monday, 3:35 pm – 5:30 pm; all students & Board members must attend
Trabant University Center – Multipurpose rooms A-C

September 17: *Orientation Meeting for New Thesis Directors and Second Readers*

Friday, 4-5 pm – Gore Hall, room 115

October 22: UNIV 402 students: First complete thesis draft due to thesis director.

Nov. 1 & 3 [tentative] **Formatting and Defending a Thesis** (choose either date and attend)

Monday, 3:30 pm – 4:45 pm; Location TBA

November 8: **Research Group Presentations**

Monday, 3:30 pm – 5:30 pm; Locations to be announced

November 15: **Research Group Presentations**

Monday, 3:30 pm – 5:30 pm; Locations to be announced

- November 15 Winter graduates: Set a date for your thesis defense by November 16
- December 6: UNIV 401 students: **Progress Report** due via web form to Thesis Committee
- December 6: UNIV 402 students: Thesis Defense should be held by this date. Format Review in the URO should be held by this date.
- January 7: UNIV 402 students: the final copy of the Thesis must be submitted by noon.
- January 8: Winter Commencement

Syllabus for Spring Semester (11S)

- February 14: Spring **Orientation** Meeting
Monday, 3:30 pm – 5:30 pm - Trabant Multipurpose Room A/B
- Feb. 21 & 24 [tentative] **Formatting and Defending a Thesis**
3:35 pm – 5:30 pm; location TBA
- February 28: Research Group **Presentations**
Monday, 3:30 pm – 5:30 pm; Locations to be announced
- March 7: Research Group **Presentations**
Monday, 3:30 pm – 5:30 pm; Locations to be announced
- April 4: First **complete thesis draft** due to thesis director.
- April 18: **Set a date for your thesis defense by today**, working with all of your committee members to select a day and time for your defense (which must be held before May 20).

SATURDAY **SENIOR THESIS SYMPOSIUM**
May 7: Perkins Student Center
9 a.m. - 1 p.m. Either a poster or an oral presentation at the Symposium is encouraged of all Senior Thesis Candidates. Regardless of whether or not you present, you are required to attend the Symposium.

FRIDAY, Thesis **defense** should be **held** by this date.
May 20:

FRIDAY **By noon**, candidates submit one printed copy and an electronic copy of thesis to the Undergraduate Research Office. The printed copy should include the signature page complete with the required signatures. Also submit a **money order** (not check or cash) payable to the University of Delaware for \$7.75 to help pay binding costs.
May 27:

SATURDAY
May 28: **COMMENCEMENT**

Descriptions of the Course Meetings

Orientation Meeting: All candidates will attend the orientation meeting, which is organized as follows:

- The first 20 minutes will be devoted to an overview of the senior thesis program's structure and procedures. Lists of identifying students' thesis topics and committee members will be distributed.
- The remainder of the meeting will be spent with your research group of four to six students and your group's facilitator, a faculty member from the Board of Senior Thesis Readers who will serve as third reader for each member of your group.

Research Group Presentations: In the fall semester two consecutive meetings are scheduled so that each research group will be able to hear presentations by its members. These meetings will be facilitated by the group's third reader. You are required to attend the research group meetings for the week you are not presenting.

Group Presentations: On one of the group meeting dates, you and the other members of your group will give an informal talk, 10-15 minutes in length, in which you describe your work-in-progress to each other and to the thesis students who are present from other groups. A five-ten minute question and answer period will follow each student's talk. On the other date, you will attend the presentations of another group of your choice.

Attendance Choices: How do you decide which group to attend? By late September, the meeting dates of each separate group will be posted on the Undergraduate Research Program website (<http://urp.udel.edu>). Once they are posted you may register for the group meeting of your choice by sending an email to Christine Yacyshyn (christineyak@gmail.com). The sign-up rule is "first come, first choice." You have two weeks to register your choice. (If you have not registered at the end of the two weeks, you will be assigned to a set of presentations and notified via email.)

Learning Goals: As a researcher, you need to get reactions to your work both from people whose research interests are similar to yours and from people who are interested in your topic but are not in your field. The ability to explain your specialized work to non-specialists in later life will be essential if you continue in research and useful in any other line of work. Here are some of your possible future audiences: your colleagues, your research subjects, human subject review boards, people who have information or materials you need to use in your research, granting agencies, industrial sponsors, the marketing/long-range planning division of your company, students, community groups, alumni, the media, congressional staffers, your spouse/in-laws . . . and more.

Also, commenting on the work of other researchers, in one's own field and in other fields, is a professional courtesy that researchers owe one another. Listening "with a pencil in your hand"-being alert to your own reactions to a talk (or poster, or article draft that a colleague gives you) and formulating helpful questions--is a learned skill. It takes practice. Now, while you are still a student, is a good time to gain that practice.

Formatting and Defending a Thesis: At this meeting, you will learn more about the University's Thesis Formatting Regulations, the logistics of scheduling your Defense, and what will be required for the final submission of your Thesis. You will be able to make a final decision about whether you would like to give a poster or oral presentation at the Undergraduate Research Symposium.

Senior Thesis Symposium: The Senior Thesis Symposium provides a formal but friendly occasion for you to present your final research findings to an audience of younger student researchers, peers, faculty, the university community and parents. You will have the opportunity to present a poster or exhibit, or to make an oral presentation. Attendance is required. Participation is strongly encouraged. Here are comments from past graduates about making a presentation at the Symposium:

The Symposium was helpful in that I was more prepared for my thesis defense as a result of the questions asked me at the Symposium.

I think the Symposium was one of the best parts of the experience. By being able to present my research not only to peers, but also to faculty and interested members in the community, I was able to reflect on the experience as a whole and realize the importance of my research.

The Symposium was a wonderful event. The keynote speaker was very inspiring and I found that giving a presentation was good preparation for my thesis defense.

Preparing for the Symposium really cleared up my ideas and made writing the thesis a lot easier.

Format Review: Students are required to follow the senior thesis format specifications outlined by the University of Delaware. The [Senior Thesis Format Manual](#) is available online and in the URO. In the spring, format reviews will be scheduled for each student at the URO.

Progress Report: In addition to the scheduled events described above, an approved description of research-in-progress is required in the first semester. Candidates must submit the report, via web form, to all three committee members for review and approval.

GRADING

At the end of the first semester, an “S” grade is normally assigned to your UNIV-401 credits; “S” means “the project is continuing in the next semester and will be judged upon completion.” The final thesis is graded by your thesis director at the end of the second semester, and its grade is assigned to all six thesis credits.

Attendance at all UNIV 401/402 course meetings is **required**, unless otherwise noted. **NOTE:** An unexcused absence from a research group meeting may result in the lowering of your grade by half of a grade point. (Contact the Undergraduate Research Office--831-8995--immediately if you are forced to miss a required session.)

Thesis quality is an important consideration in awarding the DWD and HDWD. The work is expected to be objectively excellent. Regular consultations with your thesis director, early production of drafts and revisions, and your own and your director’s concern for quality should ensure a performance accurately described as “distinguished.” Furthermore, course requirements must be met in order to obtain a good grade for all six credits.

If you were to satisfy the thesis requirement for the DWD or the HDWD but fail to meet the cumulative or major grade index requirement at the time of graduation, you would not be penalized by loss of credit. The six (6) credit hours of UNIV-401 and UNIV-402 would be retained and graded and serve as elective credits in your major field in most departments (check with your advisor), but the enhanced degree would not be awarded.

IF YOUR THESIS INVOLVES HUMAN SUBJECTS

Senior thesis candidates who intend to use people, either individually or in groups, for experimental purposes--whether these involve physical, chemical, electrical or psychological stimulation of responses within the body; interviewing or administration of surveys or questionnaires; or other techniques of measurement or evaluation--must have obtained from a University of Delaware Human Subjects Review Board either an approval or an exemption **before** working with the subjects. Some low-risk research is exempt from board review; determination of exemption is made by the Vice-Provost for Research, who chairs the University Human Subjects Review Board.

Procedure: You and your thesis director must contact the University's Office of the Vice Provost for Research to discuss whether your project is eligible for an exemption from a full-board review **before you begin your research**. If your project does qualify for an exemption, you must submit in writing the category of exemption, description of the project, copy of any survey, test, or interview questions to be used in the project, and copy of any letter, advertisement, or other written information you will send or give to prospective participants.

Note: A copy of the memo you receive granting approval or exemption must be included as an **appendix** in your thesis.

Questions: For all questions or concerns about the process of applying for an exemption or working with human subjects in general, contact Elizabeth Peloso, Director of Compliance, at (302) 831-2136 / epeloso@udel.edu.

DEALING WITH DATA

If you will be using data in your research, you will need to take a course, such as Psychology Measurement and Statistics, which teaches data analysis. Consult your faculty advisor or the URO.

THE THESIS DEFENSE

The culmination of your undergraduate research, the thesis defense, launches your individual efforts and conclusions into the domain of public information and record. For this reason, the defense is usually a public event to which all interested members of the community--faculty, students, staff, and citizens--are invited. A public defense is desirable for a number of reasons. First, it provides valuable experience for students who plan to pursue graduate degrees since such degrees routinely require public defenses of theses. Second, it builds your self confidence; you are the primary investigator, the expert, with interesting new work to share. Finally, a public defense affirms your self worth and the worth of your project since faculty and peers are provided with a public forum for expressing their approval and appreciation. Discuss with your thesis director which defense option--public or private--will be most appropriate for you.

Submitting the Final Defense Draft of Your Thesis to Committee Members: You must provide a complete draft of your thesis to your thesis director by the first week of April. A final draft of the thesis, reflecting all requested revisions, must be provided to all committee members at least one week prior to the defense.

Defense Procedure: Typically, an HDWD or DWD candidate's defense will proceed in the following fashion: In a seminar room or classroom, you will meet with committee members and other interested audience. You will begin by giving a 20-25 minute formal oral presentation of your findings using slides or other visual aids where appropriate. Your thesis director, as chairperson of the committee, will then invite questions from the committee and other members of the audience. Questions may range from detailed clarification of your research procedure to broad reflections on issues in your field of study, although the emphasis will be on your thesis itself. This questioning usually lasts approximately an hour, after which the defense ends and the general audience leaves. You will then leave the room for about ten minutes so that the committee can discuss the defense and any specific revisions or additions you must make in your final version of the thesis. The committee will then notify you that, pending the completion of these revisions/additions, the thesis as defended has been judged "distinguished."

Defense in the Creative Arts: The format for the defense of a thesis in the creative arts is basically the same as for theses in other disciplines. The student must provide the written and visual portion of the thesis to the defense committee at least a week before the defense. Then all members of the thesis defense committee attend the candidate's art exhibition, design presentation, show, or performance. A meeting with the committee for discussion is held either immediately following the show or performance or within a few days. During this discussion, which should be about an hour long, the thesis director serves as moderator, asking questions of the candidate and inviting questions from other members of the committee. At the end of the discussion, the candidate leaves the room for about ten minutes so that the committee can discuss the defense and agree upon any specific revisions or additions that will be required for the final version. Requested additions may include visual reproduction of the exhibition installation, design presentation, show, or performance. The committee then notifies the student that, pending completion of these revisions/additions, the thesis as defended has been judged "distinguished."

Attending Thesis Defenses and the Undergraduate Research Symposium: You may wish to be in the audience of a thesis defense before you make your own presentation. In the spring of your junior year, you should take the opportunity to attend both undergraduate and Master's Degree thesis defenses in your department. Honors Degree with Distinction or Degree with Distinction candidates are required to attend the Undergraduate Research Symposium in May of their junior year. This event features brief presentations by senior thesis candidates in all fields, either in a poster/exhibit format or in talks.

FORMATTING YOUR THESIS

As you begin writing your thesis, consult the Degree with Distinction/Honors Degree with Distinction Thesis Format Manual, available from the URO. Plan to devote a brief amount of time to considering how you want to format your thesis. Your thesis should be organized in chapters and sub-headings, and there are very specific requirements concerning margins, page numberings, and the formatting of particular pages such as the Title Page and the Approval page. These guidelines

are set by the University of Delaware, and it is vital that your thesis follow them. Each thesis candidate is required to have a **format review** at the URO. Format reviews will be scheduled throughout April. Format errors must be corrected **before** you submit your final thesis. If you are unsure how to fit your thesis into the format requirements, schedule an appointment with an adviser at the URO **before you** begin writing.

Attached as an appendix to this handbook (p. 21-22) is a **checklist** that goes over the major formatting requirements for all standard senior theses. This checklist can serve as a guide for you as you begin formatting and also as a final check when you think you are done. The information on the checklist is broad and meant only to provide you with a basic idea of everything that needs to go into the writing of your thesis—more specific information on each of the included points can be found in the Senior Thesis Format Manual [add in link to website].

Time saver: The University provides Senior Thesis Style Sheets, which are blank templates already set with most of the necessary formatting requirements. It is highly recommended that you use them, and they are available at <http://www.udel.edu/topics/udthesis>. When using the style sheets please devote time to reading the included Readme file for instructions on how to use they sheets. Doing so will save you time in the long run.

Thesis Format in the Creative Arts: Although the introductory and explanatory written portions of an arts thesis can be quite short, keep in mind that they **must** be well written and must meet University of Delaware format specifications. It is important that you begin working on the written part of your thesis early in the second semester. For theses using visual reproductions, slides should be presented in slide sleeves that will be bound with the typed pages or photographs should be mounted on pages to be bound. All visuals must be well identified with labels, captions, or visual identification pages. Identification should include dimensions, media, and date of completion. Advisors in the Undergraduate Research Office assist each arts candidate individually to ensure the thesis meets these specifications.

DEGREE TITLES

The Degree with Distinction is awarded as “Bachelor of Arts in [major] with Distinction,” “Bachelor of Science in [major] with Distinction,” “Bachelor of [major] Engineering with Distinction,” etc.

The Honors Degree with Distinction is awarded as “Honors Bachelor of Arts in [major] with Distinction,” “Honors Bachelor of Science in [major] with Distinction,” “Honors Bachelor of [major] Engineering with Distinction,” etc.

The title is recorded both on your diploma and on your official transcript. It is part of your official degree title as listed on your curriculum vitae. Consult the [Senior Thesis Format Manual](#) for more information on how your degree is recorded on your thesis title page.

FINAL THESIS SUBMISSION

By noon of the last working day before Commencement, your final approved thesis must be submitted to the Undergraduate Research Office. An electronic copy (as a PDF) must be submitted, and at least the title page, signed approval page, and abstract on bond paper. The approval page

must be signed by all thesis committee members (but not by the Director of the Honors Program or the Chair of the University Committee on Student and Faculty Honors). The electronic version can be submitted on a CD, Zip disk, or USB flash drive; since this version of your thesis will be copied onto an Undergraduate Research office hard drive, your electronic device will be returned to you.

It is possible for you to submit a print copy on bond paper to be deposited in the University Archives. If you choose to do so, you must also provide a money order (not check or cash), payable to the University of Delaware, for \$7.75 to contribute to the cost of binding the library's copy of your thesis. Money orders can be obtained from a post office or any bank. You will still be required to submit an electronic copy of your thesis as a PDF.

If you would like a bound copy of your thesis for your personal use (or if your director or department requests a print copy), you may leave additional signature pages with the URO and a self-addressed envelope, so the approval pages can be returned to you after being signed by either the Director of the Honors Program or the Chair of the University Committee on Student and Faculty Honors.

The electronic copy will be kept at the Undergraduate Research office for reference by future senior thesis candidates. Additionally, if you grant the URO copying consent, your thesis may be made available on the University of Delaware Library's Institutional Repository. See the [Copyright Consent Form](#) for more information.

WITHDRAWAL

Sometime during the fall or spring semester, you may realize that writing a thesis is not feasible for you at this point in your academic career, and that is perfectly all right. There is never a penalty for withdrawal from candidacy in either the DWD or HDWD program. In fact, **full recognition is given for all the work you have accomplished.** Thus, if circumstances become unfavorable to the timely completion and defense of your thesis, you will receive individual help from the Undergraduate Research Office, as well as from your thesis director, in working out the best alternative plan.

Credit: A student may withdraw from the program at the end of the first semester and receive three credits, or withdraw at the end of the second semester and receive six credits. The credits received and grades awarded are independent of any "Distinction" designation. **Be aware that if these credits are changed to another course, UNIV 402 will not count as a second writing requirement or as an Honors capstone course, and may affect whether or not you receive an honors degree (different from the Honors Degree with Distinction).** If the thesis is not defended, the UNIV-401 and UNIV-402 registration must be changed to research or special problem (466) credits in the major department and the "S" grade must be changed. **For information about withdrawing or changing registration, please contact Meg Meiman (meiman@udel.edu).**

Some Examples of Alternatives:

If you have completed research for your thesis but have not completed the thesis itself, the solution may be to write up the results of the research that has been accomplished in a term paper or technical report and reclassify the thesis credits as "independent study" or "special problem" credits (466) in the major. Another option is to withdraw from the senior thesis course. In this case a "W" is recorded on the transcript.

If your thesis is nearly completed but requires just a few weeks beyond the thesis defense deadline at the end of the second semester of your senior year, you may wish to delay graduation from June to August. In this case, you must request an “S” grade for UNIV-402 and reschedule the defense date with the thesis advisory committee. There is no tuition or other financial cost to the student who uses this option. (Also, it will not interfere with your plans to begin graduate school in August.)

If you complete and successfully defend your thesis but your final grade index is below the level required for the enriched degree, the thesis credits will remain on the transcript (UNIV-401/402). In this case, even though the enriched degree cannot be awarded, faculty letters of recommendation and student resumes can refer to the successfully completed senior thesis.

If you encounter a serious problem with your thesis and are considering withdrawing or delaying your defense, you **must** confer with an advisor in the URO, since it is important to be thoroughly familiar with the different options available. **For more information about the withdrawal procedure, please contact Meg Meiman (meiman@udel.edu).**

APPENDIX: THESIS FORMATTING CHECKLIST
Have you done all of this?

General Organization

- Assembled the sections of your paper in the correct order (front matter, body, back matter)?
- Included the required title page, table of contents, approval page, and abstract?
- Used the correct name for your major and the correct wording for your degree (including conferral date) on the title page?
- Included the correct signatures for your degree on the approval page?
- Included in the table of contents all sections of the paper that follow the table of contents?
- Divided your thesis into chapters which logically break up the information?
- Followed a consistent reference style, using correct spelling, accurate dates, and consistent punctuation for all references?
- Verified that every source mentioned/discussed in the body of the paper appears in the final Reference list or Bibliography?
- Enclosed a copy of your approval (or exemption) as part of your appendix?
- Included any necessary pocket material?

Specific Formatting (Paper, Page Numbers, Spacing, Margins, etc...)

- Used bond paper with a minimum cotton content of 25% and used the same paper throughout the thesis?
- Set correct margins for every page?
- Checked that all page numbers are formatted consistently (font size and type), as well as placed correctly throughout the thesis?
- Verified that paper sections actually appear--with correct headings--on the page numbers indicated in the table of contents?
- Used a standard, 12-pt. font consistently throughout the thesis?
- Used consistent spacing between headings and text, text and figures and tables, and between paragraphs?
- Correctly formatted table headings and figure captions?
- Matched exactly the table heading or figure caption to the title and page number in the list of

tables or figures?

- ❑ Observed the margin and page numbering requirements for tables and figures?
- ❑ Checked to see that references or bibliographic entries and table and figure captions are not split across two pages?
- ❑ Checked for margin errors and flawed or missing pages in all copies of your paper after photocopying the original?
- ❑ **Referenced all of your formatting against the Sample Pages provided in the manual?**
- ❑ **Proofread your entire paper for correct spelling, grammar, usage, and punctuation?**