



**DEAN'S SCHOLAR'S HONORS PROGRAM**

**HONORS THESIS GUIDELINES**



# THE DEAN'S SCHOLARS HONORS THESIS GUIDELINES

Before beginning your thesis, read all the guidelines and check in with the Honors Advisor for your department. The advisors' names and contact information are listed on the department guidelines in this handout. Let your advisor know when you are planning to graduate and make sure that both you and *your research supervisor* understand the process and deadlines. Read the information below for more details on the DS Honors Thesis and general instructions for the format.

## 1. SUPERVISION

The supervising professor will generally be a faculty member in the department granting the degree. Students may do thesis research in another department in our college, in another department outside our college, or even at another institution. In those cases, however, the department in which the degree is earned must have a faculty member willing to co-supervise the work and co-sign the thesis.

There should be at least two faculty members approving the thesis. One will be the supervising professor and the other is the department Honors Advisor. The co-supervising professor must also approve the thesis, if the primary supervisor is not a member of the department.

## 2. LEVEL

Most departments have guidelines for the honors thesis. Talk with the Honors Advisor in your department before you begin writing the thesis to be certain you understand the requirements and expectations. In general, the thesis should be a scholarly work that shows the writer's knowledge of the relevant scholarship in the field and contributes to that scholarship. The project being described should define an unresolved problem in the field, and you should indicate what you have done to push towards resolution of the problem.

## 3. ELEMENTS

**Abstract:** The abstract, which briefly defines the problem and summarizes your results is generally 1 – 2 pages and is written at a level readable by almost *any undergraduate* in the College.

**Background:** This section defines the problem, including the importance and background, and provides a scholarly review of the relevant literature in the field. This section should be readable by *any Dean's Scholar*.

**Results:** This section describes your work. The format for this will differ, depending on the field, and should satisfy your supervising professor.

**Discussion:** You should provide a discussion of your results and how they fit into the bigger picture. This should not be a repetition of the results. Instead, you should focus on the interpretation and significance of your data. If there were unexpected results or approaches that were unsuccessful, you can explain that in the discussion. You may also describe additional experiments or approaches that you would use if you were to continue with the project. This section should be readable by *any Dean's Scholar*.

**Bibliography:** An alphabetized list of all published information referred to in the body of the thesis.

## 4. LENGTH

This is area-dependent. Some documents may have many pages of data or software (perhaps in appendices) and others may not. Talk with your supervising professor or the Honors Advisor in your department to ascertain their expectations.

## 5. FORMAT

A hard copy will be given to the supervising professor(s) for approval. The cover page will have a place for the supervising professor's signature, indicating that the thesis meets the department's requirements for the honors degree. A copy of the signed cover page and a hard copy or PDF of the thesis should be given to the Honors Advisor by the stated deadline.

Submit a copy of the signed cover page and PDF of the thesis to the Dean's Scholars office. We

would like to maintain a web site with all of the theses to serve as a guide for future students and to show the outstanding research that is being done by our students. Unless you object to having your thesis available online or in the DS office or your supervising professor does not want the data made available prior to formal publication, please print and sign the permission page and turn it in to the DS office with the cover page.

## **5. PRESENTATION**

A publicly announced oral presentation or participation in the College of Natural Sciences Undergraduate Research Forum is expected.

## **6. DEADLINES**

The presentations should be prior to exam week, and the final documents are due by the dates indicated on the department guidelines. Check with your readers to determine their deadlines for reading and signing the document, but plan to turn in your thesis to your readers in time to **allow them at least 2 weeks to read and approve the thesis**. The PDF or hard copy and a copy of the signed cover page should be given to the Honors advisor **by the date indicated on the department guidelines**.

# SAMPLE COVER PAGE

## THESIS GUIDELINES

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*Add or delete information as required by your department*

TITLE OF THESIS

Presented by (your name)

In partial fulfillment of the requirements for graduation with the  
Dean's Scholars Honors Degree in (Department)

\_\_\_\_\_  
(Name)  
Supervising Professor

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Name)  
Co-Supervising Professor

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Name)  
Honors Advisor in (Department)

\_\_\_\_\_  
Date

# SAMPLE PERMISSION PAGE

## THESIS GUIDELINES

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Add or delete information as required by your department

I grant the Dean's Scholars Program permission to post a copy of my thesis on the University of Texas Digital Repository. For more information, visit <http://repositories.lib.utexas.edu/about>.

*(title of thesis)*

Department:

\_\_\_\_\_  
(Your name, printed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
(Supervising professor's name, printed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



# DEPARTMENTAL HONORS THESIS GUIDELINES

\*Note that the Department of Computer Sciences has a more extensive guide than most departments, and some of the advice given there might be of interest to non-CS majors as well. See *guide for CS 379H* on page 24.

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## DEPARTMENT OF ASTRONOMY

*Honors advisor and contact person for questions about the honors thesis:*

**DR. DON WINGET**

*Best way to reach Dr. Winget:* dew@astro.as.utexas.edu • 512-471-3404

*Number of readers required for the thesis:*

Research advisor

One additional reader if the research advisor is not a tenure/tenure track member of the department

*Presentation or defense of thesis required?* No

*Deadline for turning in completed thesis:* One week prior to the last class day

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy and PDF file to Dr. Winget

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No

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## SCHOOL OF BIOLOGICAL SCIENCES

*Honors advisor and contact person for questions about the honors thesis:*

**DR. RUTH BUSKIRK**

*Best way to reach Dr. Buskirk:* rbuskirk@austin.utexas.edu • 512-471-7793

*Number of readers required for the thesis:*

Research advisor

One additional reader if the research advisor is not a tenure/tenure track member of the department

*Presentation or defense of thesis required?* No. Participation in the CNS Undergraduate Research Forum is encouraged.

*Deadline for turning in completed thesis:* Last class day

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy to Dr. Buskirk

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No

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## SPECIAL DEPARTMENTAL HONORS IN BIOLOGY – GUIDELINES FOR THE BIO 379H HONORS THESIS

### **SUPERVISORS:**

The supervising professor will generally be a faculty member in the School of Biological Sciences or a faculty member in another department in the College of Natural Sciences who is affiliated with a Graduate Studies Committee in Biological Sciences. The actual supervisor may be in another department outside our college, or even at another institution, but in that case a faculty member in the School of Biological

Sciences must be assigned to be a second reader. Similarly, if the supervisor is a Research Scientist or a Lecturer, then the department in which the degree is earned must have a faculty member willing to co-supervise the work and co-sign the thesis. There should be at least two faculty members approving the thesis. One will be the supervising professor and the other is the department Honors Advisor.

#### **THESIS CONTENT:**

Each finished research thesis should have a well-defined subject or purpose clearly stated in the introduction. In general, the thesis should be a scholarly work that shows the writer's knowledge of the relevant scholarship in the field and contributes to that scholarship. The project being described should define an unresolved problem in the field, and you should indicate what you have done to push towards resolution of the problem. The Abstract, which briefly defines the problem and summarizes your results is generally 1-2 pages and is written at a level readable by undergraduates in the College. It is important that the Abstract be written for the intelligent layperson. It is particularly useful if the students write the Abstract, Introduction, and Discussion as if they were addressing the interdisciplinary board of a grant-giving agency and had to explain the significance of the project to a group of intelligent people who know next-to-nothing about the field.

#### **THESIS FORMAT:**

The format used should conform to the technical language of its field and, in general, should include: Abstract, Introduction or Background, Materials and Methods, Results, Discussion, References, Tables, and Figures. The thesis should follow a manual of style that is in use in its field. It should also be well-proofed. A BIO 379H thesis may be around 10,000 words, but there is no fixed length requirement, and this will vary with the nature of the project.

Most theses should have a list of works cited, following one of the standard bibliographical forms; the exact format will be up to the Supervising Professor. Students should make sure that their audience can tell what information had its source in their own original research, and what had its source in work done by others.

#### **SUBMISSION:**

The cover page will include thesis title, student's name, and date. It will have a place for signatures of approval by the supervising professor, the second reader (if any), and the Biology Honors Advisor. A printed copy of the signed cover page and the Abstract as well as an electronic file (e.g., pdf) of the entire thesis should be submitted to one of the Honors Advisors for the School of Biological Sciences: Ruth Buskirk, David Crews, or Alan Lloyd.

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## **DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY**

*Honors advisor and contact person for questions about the honors thesis:*

**DR. JOHN F. STANTON**

*Best way to reach Dr. Stanton:* jfstanton@mail.utexas.edu • 512-471-5903

*Number of readers required for the thesis:*

Research advisor

One additional reader if the research advisor is not a tenure/tenure track member of the department

*Presentation or defense of thesis required?* No

*Deadline for turning in completed thesis:* One week prior to the last class day

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy to Dr. Stanton

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No

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## DEPARTMENT OF COMPUTER SCIENCES

(See CS 379H info on following pages for more information.)

Honors advisor and contact person for questions about the honors thesis:

### **DR. ROBERT VAN DE GEIJN**

(Additional information available in the Undergraduate Advising Office located in GDC 2.702)

Best way to reach Dr. Van De Geijn: [rvdg@cs.utexas.edu](mailto:rvdg@cs.utexas.edu) • 512-471-9720

Number of readers required for the thesis:

Research advisor

One additional reader

Thesis committee also includes an external committee member and the honors advisor

*Presentation or defense of thesis required?* Yes. An approved oral presentation to your supervising instructor, second reader, and an assigned member of the Undergraduate Thesis Committee during the week prior to the last week of class.

*Deadline for turning in forms:* Completed form(s) will be due in GDC 2.702 by the fourth class day(second class day in summer session) at 12 noon of the semester when you plan to graduate.

*Forms can be downloaded:* <http://www.cs.utexas.edu/academics/undergraduate/forms/>

*Deadline for turning in completed thesis:* Draft due before oral presentation. Final thesis and documents due to the committee and department by the last class day.

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy to Dr. Van De Geijn

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No

## CS 379H – UNDERGRADUATE HONORS THESIS STUDENT GUIDE

CS 379H provides highly qualified undergraduates with an opportunity to participate in a research project under the direct supervision of a faculty member. This course should be of special interest to students planning research-oriented careers and intending to pursue graduate study. Students successfully completing CS 379H and meeting GPA requirements are awarded the distinction of graduating “With Special Honors in Computer Sciences”.

To give students a preview of graduate-level research, CS 379H has been designed to mimic the process of doing a master’s thesis or doctoral dissertation: the student must find a supervising instructor, decide upon a research project, work at his or her own pace to produce results, write a thesis describing the research, and then defend it in a presentation before a group of faculty members.

This document is intended to overview the requirements for CS 379H and to provide helpful suggestions to students interested in taking this course.

### **WHEN TO TAKE CS 379H**

Many students take CS 379H their last semester before graduation. If you do this, plan your schedule carefully to ensure you have the time needed to complete your project without delaying your graduation. Be aware that job interviews and site visits will take away from your research.

If you are applying to graduate school, taking CS 379H a semester earlier may be worthwhile. This will allow you to describe your research in your graduate school application, and your supervising instructor may provide a valuable letter of recommendation.

### **PREREQUISITES**

In order to take CS 379H, you must meet the following requirements:

1. You must have at least a 3.0 overall UT grade point average.
2. You must have at least a 3.5 CS grade point average. Your CS grade point average is computed using all grades you have earned in UT courses having a CS prefix.
3. You must have completed CS 429 or 429H and CS 336 or 336H.
4. You must have completed any upper division CS courses relevant to your area of research, as determined by your supervising instructor and the honors faculty advisor. (For example, if you are interested in working in the area of operating systems, you must first complete CS 439H.)

**Additionally**, you are strongly encouraged to have taken CS 370 before registering for CS 379H. In the absence of this, you will need to show other evidence of research and a strong endorsement from your research supervisor.

### **FINDING A SUPERVISOR**

It is your responsibility to find a faculty member willing to supervise your research. Be aware that faculty members have limited time and may not be available every semester to supervise CS 379H projects. Make arrangements early, preferably by the start of pre-registration the semester before you will begin your project.

Faculty members will be more agreeable to supervising you if you have done well in their courses and if your interests are similar to theirs. Brief descriptions of our faculty's research interests can be found on the faculty profiles at <http://www.cs.utexas.edu/faculty>.

### **SELECTING A RESEARCH TOPIC**

There are several ways to find a topic for a CS 379H project. Occasionally, students know exactly what problem they want to work on. More often, students rely on faculty members for suggestions.

Some faculty members direct large research projects on which both undergraduate and graduate students work. These faculty members may be able to find a piece of the larger project that is perfect for a CS 379H course. Other faculty members may have projects that require only one student to complete.

When you approach a faculty member about supervising you, expect to be asked about your interests. The more specific you can be, the easier it will be for the faculty member to help you select a topic.

There is perhaps nothing more important than finding a project that you enjoy and a faculty member with whom you can interact easily. Be prepared to talk to several faculty members about different projects before making a decision.

### **PAPERWORK AND REGISTRATION**

Once you have found a supervising instructor and decided upon a project, you should complete the CS 379H Contract and obtain the necessary signatures.

We recommend you complete the paperwork the semester before you plan to take CS 379H. You may pre-register for CS 379H even if you have not finalized arrangements for the course.

### **DUE DATES**

During the fall/spring semesters, the completed form(s) will be due in GDC 2.702 by the fourth class day at 12 noon. Failure to turn in a completed form by the deadline will result in being dropped from the course.

During the summer, the completed form(s) will be due in GDC 2.702 by the second class day at 12 noon. Failure to turn in a completed form by the deadline will result in being dropped from the course.

### **WRITING COMPONENT CREDIT**

You may take CS 379H for upper division writing component credit by registering for the appropriate unique number. Doing so adds three requirements to the course:

1. Your thesis must include at least 4,000 words of English text, exclusive of computer code, tables, figures, etc.
2. Your supervising instructor must critique the quality of your written expression and suggest ways in which your writing may be improved.
3. The quality of your written expression must be a factor in determining your course grade.

### **THE SECOND READER**

While you are working on your research, you should make arrangements with a faculty member to serve as your second reader. This faculty member will read your thesis, attend your presentations, and approve the work you have done. Your supervising instructor will assist you in finding a second reader.

### **THE THESIS**

There are no specific requirements as to the length, content, or format of the thesis. Your thesis should be a complete and concise description of the work you have done. It must be acceptable to your supervising instructor, the second reader, the external thesis committee member and the honors faculty advisor. Your thesis may be bound in any appropriate manner. The title page should include the title of your thesis, your name, your supervising instructor's name, and the date.

You can take a look at recent honors theses on the technical reports webpage, which may be found under research on the departmental webpage.

## **THE ORAL PRESENTATION**

In addition to your written thesis, you must give an approved oral presentation to your supervising instructor, second reader, and an assigned member of the Undergraduate Thesis Committee.

## **DEADLINES**

The semester you are enrolled for CS379H will be a very busy one. In addition to completing the thesis research and writing the honors thesis, there are several deadlines to be met during the course of the semester. Below is a tentative schedule of deadlines related to the honors thesis.

### ***First Month***

- Student and supervisor must finalize second reader.
- Student confirms that their second reader will be in town for the oral presentation (see below) and will be available to review the thesis during the last 2 weeks of class and first week of exams.
- Honors Advisor communicates External committee member assignments. The student's Honors Thesis Committee consists of the supervisor, the second reader and the external committee member assigned to the student.

### ***Second Month***

- Student and supervisor finalize date & time of oral thesis presentation in consultation with the honors thesis committee. The talk must be scheduled the week prior to the last week of class, at a time convenient to the committee.
- Notify the undergraduate office of the date and time so that a room can be scheduled for the talk.
- Presentations are scheduled for 1.5 hours, actual talk time should be approximately 45 minutes.

### ***Third Month***

- Student submits thesis draft to her/his committee.
- Oral thesis presentations take place. Expect to receive feedback from committee.

### ***Last day of classes***

- Students submit their final thesis documents to committee and to department.
- Students complete the Publication Release Form and submit to the department.

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## **SCHOOL OF HUMAN ECOLOGY**

*HDFS Honors advisor and contact person for questions about the honors thesis:*

**DR. THEODORE H. DIX**

*Best way to reach Dr. Dix:* teddix@mail.utexas.edu • 512-471-4912

*NTR Honors advisor and contact person for questions about the honors thesis:*

**DR. CHRISTOPHER JOLLY**

*Best way to reach Dr. Jolly:* jolly@austin.utexas.edu • 512-495-3017

*TXA Honors advisor and contact person for questions about the honors thesis:*

**DR. SHELDON EKLAND-OLSON**

*Best way to reach Dr. Ekland-Olson:* seo@austin.utexas.edu • 512-232-5224

*Number of readers required for the thesis:*

Research advisor

One additional faculty member

*Presentation or defense of thesis required?* Yes. Presentation also must be approved by the thesis committee (research supervisor and another faculty member).

*Deadline for turning in completed thesis:* One week prior to the last class day

*Required or recommended length:* No stated requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy or PDF to the honors advisor

PDF to the DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* Consult your research advisor for formatting requirements

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## DEPARTMENT OF MATHEMATICS

*Honors advisor and contact person for questions about the honors thesis:*

**DR. DAVID RUSIN**

*Best way to reach Dr. Rusin:* rusin@math.utexas.edu • 512-471-6112

*Number of readers required for the thesis:*

Research advisor

Two additional readers

*Presentation or defense of thesis required?* No

*Deadline for turning in completed thesis:* Two weeks prior to the last class day

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

PDF to Dr. Rusin

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No

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## DEPARTMENT OF PHYSICS

*Honors advisor and contact person for questions about the honors thesis:*

**DR. GREG O. SITZ**

*Best way to reach Dr. Sitz:* gositz@physics.utexas.edu • 512-471-0701

*Number of readers required for the thesis:*

Research advisor

Honors Advisor (Dr. Sitz)

*Presentation or defense of thesis required?* No

*Deadline for turning in completed thesis:* One week prior to the last class day

*Required or recommended length:* No specific requirement

*How many copies should be turned in, to whom, and in what format?*

One hard copy to the research advisor

One hard copy to the Dr. Sitz

PDF to DS office

*Are there formatting guidelines, in addition to the DS guidelines, that should be followed?* No