

February 11, 2009

To: Engineering Students (Rank 2/3/4)
From: David Tomasko, Associate Dean Undergraduate Education and Student Services and College Honors Director
Subject: Undergraduate Research - Graduation "With Distinction" Process and Scholarship Support

Are you aware that by completing an undergraduate research project you have the opportunity of graduating "With Distinction" in your major? You must have CPHR of at least 3.40 and expect to graduate **in the next two years**. Be aware you are also eligible to apply for research scholarship and internship support. **(Applications Due 2nd Friday in Spring Quarter)**

The necessary steps for graduating "with Distinction" are following:

1. Identify a faculty member with whom to do your UG research. Your Department Honors Advisor, Academic Advisor, or the University UG Research Office (<http://ugresearch.adm.ohio-state.edu/>) can be of help to you in this process.
2. During or prior to the first quarter of research, submit of a detailed project proposal, an Application for Undergraduate Research (Form attached and at <http://www.eng.ohio-state.edu/currentstudents/pdf/URSapp.pdf>) **including a Faculty Recommendation Letter** to 122 Hitchcock Hall.
3. Completion of at least 6, advisor approved, credit hours of independent study (H783 or equivalent) in support of the research project. See your Departmental Honors Advisor for specific requirements.
4. Completion of a satisfactory oral defense of your draft thesis before a faculty committee no later than the seventh week of the quarter of graduation.
5. Submission of the Final Honors Thesis to the Knowledge Bank no later than the eighth week of the quarter of graduation, using the "Graduate School Guidelines for Preparing and Submitting Theses, Dissertations, and D.M.A. Documents" as a style guideline (copies can be obtained from the Graduate School Office or Web page).

For more information, contact your **Departmental Honors Advisor** (list attached).

To be considered for scholarships/internships during the next academic year, proposals must be received in the college office by the Second Friday in Spring Quarter. Students proposing projects may compete for research scholarships and/or internships. These include:

1. Undergraduate Research and Lumley Scholarships (\$500 to Full Tuition, Su, Au, Wi, Sp)
2. Undergraduate Engineering Experiment Station Research Interns (Su, Au, Wi, Sp) {Interns must work at OSU in Su}
3. Sidney Pressey Small Grants - \$750 (Su, Au, Wi, Sp) See http://aschonors.osu.edu/scholarship_undergraduate.cfm
4. Honor's Summer Research Internships (Su) See http://aschonors.osu.edu/scholarship_undergraduate.cfm

To be considered for the Pressey Award, you must not be receiving any research scholarships from the College of Engineering.

Additional information about each of these opportunities is appended.

Also, all students are encouraged to present a poster at the May 13, 2009 **Denman Undergraduate Research Forum** to earn additional prizes.

**Departmental Honors
Advisors 2008-09**

Lisa Tilder	ARCH	Assc. Prof.	292-3948	Tilder.1	228 Knowlton 275 W Woodruff Ave
Mike Lichtensteiger	FABE	Asst. Chair	292-9351	Lichtensteiger.2	216 Ag Eng 590 Woody Hayes
Kurt Koelling	CBE	Assc. Prof.	292-2256	Koelling.1	435B Koffolt 140 W 19th Ave.
Halil Sezen	Civil	Asst Prof.	292-1338	Sezen.1	470 Hitchcock Hall 2070 Neil Ave.
Rephael Wenger	CSE	Assc. Prof.	292-6523	Wenger.4	295 Dreesse Lab 2015 Neil Ave.
Bradley Clymer	ECE	Assc. Prof.	292-3477	Clymer.1	205 Dreesse Lab 2015 Neil Ave.
Jack McNamara	AAE	Asst. Prof.	292-6778	Mcnamara.190	320C Bolz Hall 2036 Neil Ave.
Linn Van Woerkom	Eng Phy	Assc. Prof.	292-9626	Van-Woerkom.1	4180 Physics RS 191 W. Woodruff Ave.
Dorota Grejner- Brzezins	Geomatics	Assc. Prof.	292-2771	Grejner-brzezins.1	470 Hitchcock 2070 Neil Ave
Carolyn Sommerich	IWSE	Assc. Prof.	292-9965	Sommerich.1	210 Baker Sys. 1971 Neil Ave.
Yann Guezennec	ME	Professor	292-1910	Guezennec.1	E405 Scott Lab 201 W. 19th Ave.
Charles Drummond	MSE	Assc. Prof.	292-6732	Drummond.2	388 Watts Hall 2041 College Rd.
Ronald Xu	BME	Asst. Prof.	688-3635	Xu.202	286 Bevis Hall 1080 Carmack Rd.
David Tomasko	College	Assc. Dean	292-4249	Tomasko.1	122 Hitchcock Hall 2070 Neil Ave.
Seth Young	AVI	Assc. Prof.	292-4556	Young.1460	405 Avi Bldg. 164 W. 19th Ave.

College of Engineering

Engineering Experiment Station Honors Research Internships

The purpose of the Engineering Experiment Station Honors Research Internships is to provide especially promising candidates for graduation with distinction with the opportunity to significantly enhance the quality of their Senior Honors Research and Thesis Projects through a paid research internship.

- A limited number of Research Internships will be awarded competitively by the Engineering Experiment Station to engineering majors with c-phr of 3.40 and above interested in exploring research and graduate study opportunities in collaboration with a faculty advisor and in graduating with distinction in their academic major.
- The internships will consist of the following percentage of appointment through the academic year. Summer Quarter the appointment will be at 75% or 30 hours per week with a stipend of \$1,650 per month. Autumn, Winter and Spring Quarters the appointment will be at 25% or 10 hours per week with a stipend of \$550 per month.
- **Each research intern will work as a student employee with a faculty advisor and will be expected to conduct an independent research project culminating in an undergraduate thesis.** The student's research project must be for work that is not currently funded from other sources, although the work can supplement on-going research. **The emphasis is on exploring and developing additional research in the College of Engineering.**

Because extensive faculty supervision is expected, applicants will need the collaboration of a faculty mentor who will also serve as adviser for the research project. **A report on the progress of the project is required by the end of each academic quarter.**

To be eligible, applicants must have a CPHR of 3.40 and above, be enrolled as an Ohio State student during the summer of the internship for a minimum of six credit hours of independent study (783 or equivalent) in support of the research project and be approved for candidacy for graduation with distinction.

Selection will be made by the College Honors Committee, in consultation with the Engineering Experiment Station. The student's research proposal, the student's academic performance and promise, and substance of his/her plans for the summer research experience and Senior Honors Research and Thesis Project will be evaluated with respect to potential for development of research in the College of Engineering. The attached application should be completed and submitted to the College of **Engineering Honors Coordinator, 122 Hitchcock Hall, by the second Friday in Spring Quarter.**

(Please note: You may apply for the internships and scholarships separately or in combination.)

College of Engineering

Instructions for APPLICATION FOR UNDERGRADUATE RESEARCH AND RELATED SUPPORT

GENERAL INSTRUCTIONS

Application:	Complete the attached form. Your application for an Undergraduate Research must be accompanied by a project proposal including a recommendation letter from the faculty member who will supervise it.
Where to Submit:	122 Hitchcock Hall.
When to Submit:	To be considered for support, the deadline is the end of the working day on the 2nd Friday in the Spring Quarter. Proposals not requesting funding can be submitted at any time.
Conditions of Eligibility:	You must plan to be a candidate for graduation <u>with distinction</u> , or plan to complete an equivalent research project, and expect to graduate in the next two years.
Amount of Award:	Awards generally range from \$500 – full in-state tuition and are applied toward any University fees at the rate of one-third the amount of the scholarship over autumn, winter and spring, unless the project requires a different pattern of support. Any amount remaining after University fees have been paid will go directly to the student no later than the sixth week of the quarter. Students may receive funding for only one year.
Funding Conditions:	Please note the following two scholarship categories, under which this award will merely substitute for other forms of aid with no net gain to the recipient. First, if you are receiving need-based aid, the Undergraduate Research Scholarship can only bring total awards to the amount allowable under the Title IV federal regulations which establish need. Second, if you are receiving University scholarship funds at the maximum currently allowable (\$22,500--which is the full institutional cost of education for in-state students) you are ineligible for additional funding.
Enrollment Conditions:	Recipients generally must be enrolled as full-time students (12 credit hours) during the quarters in which they receive funding, although enrollment for 5 credit hours with a heavy research emphasis is allowable.
Method of Selection:	Applications, proposals, and letters of recommendation

are reviewed by the College of Engineering Honors Committee. The number of scholarships awarded will be determined by the amount of funds available. Applicants will be notified of the results of the competition by the end of the Spring Quarter.

- Proposal Specifications: The proposal shall be up to 5 pages of text (not counting title or bibliography page) using 12 point font and no less than double spacing. Multiple sections can appear on a page (i.e. a separate page is not required for each section). Figures are limited to four figures and should be combined on a 6th page. All pages shall have at least a 1 inch margin all around. A PROPOSAL WILL NOT BE CONSIDERED IF THESE REQUIREMENTS ARE NOT MET.
- Criteria for Selection: Each proposal will be reviewed for a) Technical Feasibility, b) Clarity of Presentation, and c) Research Contribution (equal weight for each attribute) by the Honors Committee.
- Final Report: One copy of the final report or thesis is to be filed with the Knowledge Bank by the end of the eighth week of the quarter of graduation.
- Project Adviser: The project adviser must be a faculty member with graduate advising status with an engineering program.

THE PROJECT PROPOSAL

Because most applicants are of comparable promise and ability, the quality and significance of the research project are decisive factors in making scholarship awards. Consequently, you should pay special attention to the following remarks about project proposals.

1. Select a research topic which you and your faculty project adviser believe can be completed within the period in which the scholarship is tendered. Elaborate proposals with questionable timetables will not be viewed favorably.
2. Prepare a project proposal of not more than five typewritten pages. This proposal should include a concise summary statement of the methodology to be used in the research, a discussion of related scholarship in the discipline, the results anticipated, the general significance of the project, and a bibliography. Since your proposal is in competition with proposals from many other fields and will be judged by a small faculty panel which may not include a specialist in your field, you should attempt to state your proposal and its significance as clearly as possible. Your proposal also should include information concerning your background in the project field and a statement concerning any arrangements that have been made to obtain or use special equipment or other resources required for the project.
3. Because the project is to be carried out in close cooperation with your

project adviser, the proposal should be written in consultation with the engineering graduate faculty member who will serve as the project adviser and write the official Project Adviser Recommendation.

PROJECT ADVISER RECOMMENDATION

You should be certain to have your project adviser sign the portion of the Application form and **add a letter of recommendation to the proposal**. Submit the recommendation letter and proposal to 122 Hitchcock Hall by the proposal submittal deadline. The importance of the faculty recommendation cannot be overemphasized. As students of high ability, most applicants will present evidence of academic aptitude and achievement. Therefore, the committee will need to base its decision at least partly on the potential value of the project for the student. The interest and concern of the faculty member and his/her assessment of the student and the project often will be decisive.

NOTE: Examples of successful project proposals from the past several years are on file in the 122 Hitchcock Hall, and are available for examination.

(Please note: You may apply for the internships and scholarships separately or in combination.)

APPLICATION FOR UNDERGRADUATE RESEARCH PROJECT



COLLEGE OF ENGINEERING

In order to qualify to graduate "With Distinction", this application and proposal must be approved and undergraduate honors thesis requirements must be satisfied. Projects will be evaluated on the basis of technical feasibility, clarity and research contribution.

The general criteria for graduation "With Distinction" include:

Submission of an application for Undergraduate Honors Research, and a detailed project proposal, to the Honors office (122 Hitchcock Hall). The proposal must be typed, one side, 8 1/2 x 11" paper, double spaced, not to exceed 5 pages in length. A suggested outline is attached. The signature of your Department Honors Representative is required upon submission. The proposal must be submitted during or prior to the quarter the research begins.

Completion of at least 6, advisor approved, credit hours of independent study (H783 or equivalent) in support of the research project. Independent study completed prior to the quarter during which the project proposal is submitted will not count toward the six hour criteria.

Completion of an Honors Thesis and satisfactory oral defense of that thesis before a faculty committee no later than the seventh week of the quarter of graduation and submission of the Thesis to the Knowledge Bank by the eighth week.

Engineering Honors standing at time of graduation.

Applying for Undergraduate Research Scholarship? YES__ NO__ (Application due second Friday of Spring Quarter)	Applying for EES internship? YES__ NO__ (Application due second Friday of Spring Quarter)
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APPLICANT INFORMATION (Please Print or Type)

Name	Last	First	Middle	Social Security Number
Local Address (Number and Street)			E-mail Address	
City	State	Zip		Phone Number
Major Department			Rank	Cum. GPA
				Quarter of Graduation

Project Information

Title: _____

Faculty Advisor For proposed project:	Department
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Course Number under which project will be performed (H783 or equivalent) _____

Proposed distribution of Credit Hours for research project:	SU	AU	WI	SP
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Applicant Signature _____	Date: _____
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Project Faculty Advisor Signature _____
 (Note: This implies that the advisor endorses the proposal and is willing to advise this student to this successful completion of research. **Advisors are asked to submit a one-page letter of recommendation with the proposal**)

Department Honors Representative Signature _____

SAMPLE COVER SHEET

PROPOSAL

COMPUTER SIMULATION STUDY OF DYNAMICS
IN A HIGH PRESSURE HYDRAULIC SYSTEM

Submitted to

The Engineering Honors Committee

119 Hitchcock Hall

College of Engineering

The Ohio State University

Columbus, Ohio 43210

by

Student Name

Student Address

Date

Expected Outline and Contents

Abstract

- An overview: Key points of the proposal
- 100 to 150 words
- Clear, concise
- Avoid use of highly technical terms which are not defined
- Self-contained
- A summary of the entire proposal (written last)

Introduction

- Statement of *what* is to be done
- Significance and overall purpose: *why?*
- Background: previous work in the area; is this part of a larger project
- Rationale: explanation of unique or innovative approaches
- In general, the introduction to a research proposal has more detail than you would find in the usual technical report.

Objectives

- Statement of specific objectives
- Relate objectives to overall purpose

Methods of Procedure

- *How?* Plan of attack or project design
- Step-by-step sequence of planned activities ---including *literature review*
- Techniques and methodology
- Experimental apparatus required
- Analysis of data, etc.
- *When?* Time line

NOTE: *Equipment and supplies are to be funded at the departmental level.*

Capability

- State how your educational background relates to the proposed project.
- State how completion of this project relates to your career goals.

Faculty Recommendation Letter