

Fall 2017

Honors Opportunities

Polytechnic Campus

[CS/CSE/CPI]

Faculty Honors Advisor

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[College of Integrative
Sciences and Arts/Applied
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Barrett Honors Advisor for
Poly Majors
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Honors Enrichment Contract Info:

The deadline to submit a
contract for the Fall 2017
semester is 9/14/17

Final day to complete an
Honors Enrichment Contract
project is the last day of
classes for the semester.

The College of Letters and Sciences

Science and Mathematics Faculty and Barrett, the Honors College work together to provide their student's academic advising, research and internship opportunities, scholarship information and access to distinguished lectures and other special events.

By taking [ABS/BIO/CHM/MAT/PHY] courses under an honors designation, honors students work on special projects that provide them an expanded understanding of the course subject matter. Often, these courses have a lower student-to-faculty ratio, allowing the students to work on exciting research with faculty members. Such experiences distinguish honors students from other students and help them gain entrance to graduate programs or garner sought-after jobs. Honors students receive special invitations to various events, including meeting industry, faculty, and staff. They can also gain funding for research or travel to conferences held in other cities.

Offerings for Honors Enrichment Contracts

[ABS 130 Intro to Environmental Science
ABS 207 Applied Plant Taxonomy
ABS 270 Sustainable Biological Systems
ABS 350 Applied Statistics
ABS 355 Ecology and Adaptations of Vertebrates
ABS 362 Plant Propagation
ABS 370 Ecology
ABS 373 Vegetation Measurements
ABS 380 Wildlife and Restoration Plants
ABS 440 Ecological Restoration Techniques
ABS 460 Organic Gardening
ABS 470 Mammalogy
ABS 479 Ecosystem Management Planning
ABS 482 Ecology and Planning for Restoration
ABS 494 Various topics including Laser Optics, Fire Ecology, Sustainable Desert Horticulture
ABS 560 Ecological Modeling
BCH 361 Biochemistry
BIO 100 The Living World
BIO 360 Animal Physiology
BIO 480 Methods of Teaching Biology
CHM 231 Elementary Organic Chemistry
CHM 233/234 General Organic Chemistry I and II
CHM 435 Medicinal Chemistry
ETM 301 Environmental Management
ETM 302 Water and Wastewater Treatment
ETM 502 Environmental Regulatory Framework
ETM 520 Sustainability and Sustainable Development
MAT 170 Precalculus
MAT 210 Brief Calculus
MAT 211 Mathematics for Business Analysis
MAT 243 Discrete Math Structures
MAT 251 Calculus for Life Sciences
MAT 265 Calculus for Engineers I
MAT 266 Calculus for Engineers II
MAT 267 Calculus for Engineers III
MAT 275 Modern Differential Equations
MAT 343 Applied Linear Algebra
PHY 111-112 General Physics
PHY 121 University Physics I: Mechanics
PHY 131 University Physics II: Electricity and Magnetism

Faculty and Thesis Options

Students looking for faculty members to supervise their honors theses can review the following list. Students may work with others, as well, and this list is intended as a starting point only.

Faculty members who encourage Honors work in the area of **Biology, Chemistry, Mathematics and Physics** include:

Faculty Name	Email	Research Interest
Fabio Albuquerque	Fabio.Albuquerque@asu.edu	Macroecological issues including effect of fragmentation and habitat loss on biodiversity and conservation biogeography over broad scales.
Eddie Alford	Eddie.Alford@asu.edu	Plant ecology, effects of fire/grazing and plant community interactions
Heather Bateman	Heather.L.Bateman	Wildlife biology and ecology. I am a field biologist interested in how land management and urbanization affects birds and reptiles. http://hbateman.faculty.asu.edu/
Doug Green	DM.Green@asu.edu	Riparian ecology; distribution of soils and effect on vegetation
Yun Kang	Yun.Kang@asu.edu	My research is integrated with biological experiments and mathematical models. Topics of an Honor thesis can range from how disease spreads, how social animals interact with each other, how cooperation in social insects work, etc. The focus of the thesis can be either experiments or theoretical analysis.
Jesse Lewis	jesse.s.lewis@asu.edu	Applied wildlife ecology and conservation. My research focuses on space use, habitat selection, and interactions within and among wildlife populations, particularly in relation to human influences. I often work with medium and large sized carnivores and ungulates, but am open to working with a variety of species.
Chris Martin	Chris.Martin@asu.edu	My research program in landscape horticulture involves both basic and applied studies of the physiology and ecology of exotic, desert-adapted, and desert-native plants. http://www.public.asu.edu/~camartin/Martinresearch.htm
Marianne Moore	Marianne.Moore@asu.edu	Ecological physiology with a focus on immunology and bioinformatics. My current research focuses on bat white-nose syndrome. I offer opportunities in immunology, genomics, proteomics, molecular evolution, and field biology/ecology.
Julie Murphee	Julie.Murphee@asu.edu	Animal Science, Bioethics, conservation, environmental ethics, environmental history, and wildlife nutrition
David Oakes	David.Oakes@asu.edu	Biological modeling, evolution, and functions of real variables
Xiahong Peng	Xihong.Peng@asu.edu	First-principles electronic structure calculations to study properties of materials in multi-disciplinary fields such as Physics, Chemistry, Material Science and Engineering.
Ryan Penton	crpenton@asu.edu	environmental microbiology/microbial ecology; microbial diversity and bioinformatics
Steve Saul	Steven.Saul@asu.edu	Coupled human-natural ecological system dynamics; population dynamics of marine fish; quantitative approaches to inform fisheries management; agent-based modeling; statistical population models; GIS, mapping, and remote sensing; spatial statistics; coral reef ecology and geomorphology.
Igor Shovkovy	Igor.Shovkovy@asu.edu	Theoretical physics with applications in many sub-fields of physics, e.g., condensed matter, nuclear, particle physics and astrophysics.
Kelly Steele	Kelly.Steele@asu.edu	Genome, chromosome and molecular evolution of the flowering plant genus <i>Medicago</i> which includes the important legume forage crops alfalfa and bur-clover; saguaro genome
Maxim Sukharev	Maxim.Sukharev@asu.edu	Computational (involving parallel super-computers) and experimental (utilizing hands-on laser laboratory) investigations of optical properties of various nanomaterials.
Michelle Zandieh	zandieh@asu.edu	Research in undergraduate mathematics education with a focus on teaching and learning of topics in calculus and linear algebra. Qualitative research methods to analyze data from written surveys, interviews with students or in class videos of small group or whole class discussion.
Wenwei Zheng	wzheng38@asu.edu	My research is concerned with the function and malfunction (disease) of large biomolecules. Novel computational chemistry methods are developed, with emphasis on their connection to the experiment.

Guidelines/Checklist for honors theses in the [College/Major]*

*The following provides general guidelines. Please check with the Barrett Honors College guidelines for updated information:

- Make sure you meet with your Barrett Advisor, Brady Hamilton, for your mandatory junior advising to go over the thesis process.
- The student is responsible for formulating the thesis topic, for requesting faculty to serve on the committee, to submit the necessary forms to the Honors College, and to inform the chair of the committee of all Honors College requirements and deadlines.
- Thoroughly review the Thesis/Creative project handbook and reference it throughout your project. Be aware of the deadlines and expectations of the project.
- Brainstorm ideas for your topic. Think of topics that you have a passion for and that may assist you with future goals. The students can start thinking of thesis topics as early as their freshman and sophomore years. The students should definitely have a clear plan of the thesis topics or research by their junior year.
- Investigate the research areas of the faculty in your department or in a related field and Create a list of questions and topic ideas to discuss with a potential thesis director.
- Set up a meeting with a potential thesis director. Refer to the Faculty Honors Advisor in your department, if you need additional assistance.
- Once you have a confirmed thesis director, register for the appropriate thesis course(s) (XXX492 and/or XXX493) through your director's department.
- Select the second reader in collaboration with your thesis director.
- Write your prospectus, have it reviewed and signed by your director and second reader.
- Submit your prospectus to the Barrett Advising office by the appropriate deadline.
- Meet regularly with your thesis director and second reader on the progress of your thesis/creative project.
- Schedule your thesis defense.
- Complete and file (if appropriate) the thesis reimbursement application.
- Finalize your manuscript with the guidance of your committee, and prepare for your defense.
- Plan to give your committee members a hard copy of your manuscript at least two weeks prior to the defense.
- Present at your oral defense and have your Signature page correctly formatted and signed by your committee.
- Submit your final unbound manuscript to the Barrett Advising office with correctly formatted Signature page containing original signatures (not photocopied) of all committee members, as well as an electronic copy of your thesis. See Final Copy Submission/Formatting section for campus specific emails.
- Confirm that your thesis/creative project director submitted a grade for the completed project and changed the Z grade if one was submitted in a prior semester (for 492).
- • Remember to submit the Barrett Graduation form online through MyASU during your final semester. This form is used to RSVP for Barrett Convocation and to declare your intent to complete all Barrett graduation requirements.