

Fall 2017

# Honors Opportunities

*Polytechnic Campus*

[SER]

## Faculty Honors Advisor

Kevin Gary  
Office: Peralta 230 B  
Phone: 480-727-1373  
Email: [kgary@asu.edu](mailto:kgary@asu.edu)

The Ira A. Fulton Schools of  
Engineering, School of  
Computing, Informatics, and  
Decisions Systems  
Engineering  
Bachelor of Software Engineering

Barrett Honors Advisor  
Brady Hamilton  
[brady.hamilton@asu.edu](mailto:brady.hamilton@asu.edu)

<http://barrettpoly.asu.edu>

## The School of Computing, Informatics, and Decision Systems Engineering (CIDSE)

CIDSE 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 computing/software engineering 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.

In the BS in Software Engineering program, the faculty encourage honors students to engage with them early to get involved in research and creative projects.

## Honors Enrichment Contracts

All SER prefix and CSE prefix courses in the BS in Software Engineering major map are eligible for Honors Enrichment Contracts except SER401 and SER402 (senior capstone), and special course numbers such as SER484, SER492, and SER493. SER498 and SER499 are eligible for HECs.

Students seeking to add an HEC in Software Engineering are expected to:

- Engage with the faculty member early in the semester to discuss ideas.
- Identify a project, in conjunction with the faculty, in the general topic area related to the course (if a regular course).
- Meet with the faculty mentor on a schedule determined in conjunction with the faculty.
- HECs are expected to take approximately 30 hours of work to complete, though this is a guideline not a rule. Students are expected to work closely with the faculty to identify the proper scope of their projects.

## CIDSE Faculty at Poly Campus 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.

Detailed descriptions of faculty research interests can be found at individual faculty member web pages and by reviewing publications available through ASU Libraries and service like Google Scholar. Faculty members who encourage Honors work in the area of Software Engineering include:

Faculty Name	Email	Research Interest
Ashraf Gaffar	agaffar@asu.edu	Artificial Intelligence & Neural Networks Machine Learning User Interface/Interaction Design User experience (UX) Software design methodologies, UCD
Srividya Bansal	Srividya.Bansal@asu.edu	Service-Oriented Architectures, Web Services (description, discovery, and composition), Semantic Web.
Timothy Lindquist	Tim.Lindquist@asu.edu	Mobile Computing
Ajay Bansal	Ajay.Bansal@asu.edu	Programming Languages, Theory of Computing, Logic Programming
Kevin Gary	kgary@asu.edu	Software Architecture, Agile Methods, Mobile Health (mHealth), Software Engineering Education
Javier Gonzalez	javiergs@asu.edu	Software Engineering, Human-Computer Interaction, Self-Adaptive Systems
Alexandra Mehlhase	a.mehlhase@asu.edu	Modeling and Simulation, Variable-Structure Models, Formal Specification
Robert Heinrichs	Robert.Heinrichs@asu.edu	Software Engineering for Automotives, Embedded Systems
Douglas Sandy	Douglas.Sandy@asu.edu	Embedded Systems
Ruben Acuna	Ruben.Acuna@asu.edu	Scientific Workflows, Data Management, Proteomics

## Guidelines/Checklist for honors theses in the Software Engineering 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.

The following are guidelines specifically for Software Engineering majors:

- While you may approach faculty with a creative idea, you should also understand faculty interests *before* engaging with the faculty, and be willing to find common ground between your interests and the faculty member's interest.
  - Thesis/Creative Project candidates will be expected to produce a paper of a minimum 10 single-column pages in the ACM standard format suitable to the discipline. Depending on the work, the manuscript may in fact be much longer.
  - Candidates will be expected to conduct an oral presentation of their work to the Chair, Reader, and interested members of the ASU community.
  - Candidates producing software should construct such software according to high ethical and professional standards.
  - Candidates should expect that the Thesis/Creative Project work for which the student receives SER492/493 credit will carry the same workload as 6 credits of coursework over an academic year, or approximately 300 hours.
  - Candidates should be able to identify and describe an element of discovery or critical inquiry in their work, and not merely consider the work to be a "big coding project."
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## Recent SER Honor Theses

Thesis Title	Thesis Director
USDGen: Semantic Description Generator for Web Services	Srividya Bansal
Investigation in Prolog-based Machine Translation with English-Hungarian Case Study	Ajay Bansal
Creating a Virtual Experience Using the Oculus Rift	Ashish Amresh
Enhancing Student Learning Through Adoptive Sentence Generation	Ashish Amresh
ASU M&G App	Ajay Bansal
Emergency Preparedness in a Zombie World	Ashish Amresh