Geography's intellectual traditions bridge natural science, social science, and humanities — all parts of a Liberal Arts & Sciences college. Thus, we offer degrees that allow a student to emphasize the natural and social sciences (B.S.) or humanistic and cultural studies (B.A.). Geography encompasses many topics ranging from local, community scales to the global, international realm. We also have a certificate program in Geographic Information Systems (GIS), which is a valuable skill in today's marketplace.

To learn more about opportunities in geography, you can watch short videos on core strengths of our program:

- Geographic Information Systems
- Sustainability and Planning
- Meteorology

Since geography is an interdisciplinary field of study, a geography major (or minor) coordinates nicely with a number of other majors, minors, and certificates. Programs that are especially linked to Geography include Planning, Sustainability, and others.

The specialty areas of professors in the School of Geographical Sciences and Urban Planning particularly focus on the following themes.

**Geography**
- Earth Systems, Climate Science & Urban Climate
- Sustainability Science & Studies
- Computational Spatial Science
- Place, Culture & Identity

**Planning**
- City Building & Urban Structure
- Environmental & Resiliency Planning
- Housing, Neighborhoods, & Community Development
- Spatial Analytics & Smart Cities
- Transportation Planning & Policy

Our geography alumni include:

Environmental scientists and wildlife managers, policy makers and lawyers, professors and teachers, private GIS consultants and business owners, weather forecasters and reporters, urban and environmental planners, leaders in the military and foreign services.

**For More Information**

Come visit the School of Geographical Sciences and Urban Planning on the fifth floor of Coor Hall. For input about your degrees or career paths, thesis topics or advisers, or other matters, email our Faculty Honors Advisor, Dr. David Sailor at David.Sailor@asu.edu. For detailed information about our programs and requirements, please set up an advising appointment.

Visit [http://sgsup.asu.edu/advising](http://sgsup.asu.edu/advising) to set up an appointment online. Any of our full-time advisors can guide you on all geography, urban planning, and GIS programs. In addition, Dr. Randy Cerveny (cerveny@asu.edu) helps to guide students interested in a B.S. focusing on meteorology, and Dr. Ron Dorn (ronald.dorn@asu.edu) helps advise B.A. students in Education.
SPECIAL ACTIVITIES FOR GEOGRAPHY MAJORS

GTU (Geography Club and Honors Society) - Gamma Theta Upsilon is geography’s prestigious honors society. This also serves as our geography club. Events are typically field trips that mix hikes to out-of-the-way nature spots and hard-to-get-into urban places. (For more information go to http://sgsup.asu.edu/gtu).

Internships - We encourage all majors to seek out internships. They will provide you valuable contacts and work experience that interests you most —whether it is an internship with the National Weather Service, a local city planning department, a local GIS firm, or state agencies. (See http://sgsup.asu.edu/internships for current internship opportunities and other resources for finding internships).

Formal Lectures and Informal Talks - We encourage our majors to attend our series of research talks on Thursday afternoons. Scholars from around the USA and world visit our school and give talks on their research. These colloquia are often followed by visits to local watering holes so you can get a chance to socialize with our school faculty and visitors. We also have a more informal “bag lunch” series where undergraduate majors, graduate students and faculty chat about various research experiences. (For more information go to http://sgsup.asu.edu/events)

On the Map - Our weekly newsletter helps students be aware of student activities, lectures and talks, and internship and scholarship activities. All majors receive the newsletter; if you’re not a major but would like to receive the newsletter, send a note to sgsup@asu.edu.
Special Funding Opportunities for All Geography Majors

**Bailey Scholarship** - This scholarship honors Matthew Bailey, a former geography major, through supporting undergraduate research projects. A simple proposal turned in each December provides funding support in the range of hundreds of dollars. This scholarship will support such things as travel to field sites, field supplies you will need for research, travel to interview experts, interlibrary loan, and other expenses incurred in carrying out your research. (For more information go to http://sgsup.asu.edu/matthew-g-bailey-scholarship-award)

**Ray Henkel Scholarship Award** - This scholarship, typically in the range of $250, is given annually to the geography undergraduate major(s) with the highest GPA AND who has completed 80 credit hours. (For more information go to http://sgsup.asu.edu/ray-henkel-scholarship-award)

**Research Experiences for Undergraduates (REU)** - Our school hosts a number of National Science Foundation and other grants that can offer students paid research experiences. Professors who receive NSF grants can even ask for a supplement to fund undergraduate research. But you need to plan ahead for this type of funded opportunity. To pursue or learn more about research opportunities, keep an eye out for job announcements in On the Map or contact David.Sailor@asu.edu and she can direct you to appropriate faculty members.

**Other Funding Opportunities:** There are several other funding opportunities in the geographical sciences, and these are posted at this website: https://sgsup.asu.edu/undergrad-funding

And don’t forget about **Barrett Honors College Support** - The BHC also supports some minor expenses related to undergraduate research such as lab supplies, poster printing, copying, and even some of the expenses to travel to a meeting to present research. Also, be sure to explore Barrett Internship Opportunities.

**A Note about Courses**

Most geography courses are open to Honors Contracts, allowing geography majors considerable flexibility in selecting the appropriate number and nature of courses for their program of study. In addition, many honors students take graduate seminars that qualify for honors in their senior year.

Some of our courses are offered from time to time with special Honors sections. These have included GPH 111 Introduction to Physical Geography (meets SQ general studies), GPH 210, Society and Environment (meets CLAS science & society requirement), GPH 211 Introduction to Landform Processes (meets SQ general studies), and GCU 337 Social Geography (meets SB general studies).
ADVISING TIMELINE

Note: This list is meant to supplement the expectations of the Barrett Honors College. Be sure to talk to the advisors in Barrett to ensure you are meeting their requirements and deadlines.

Freshman and Sophomore Year: This is the time when you will be fulfilling your general studies requirements. When you have identified geography as a possible major (or minor), we strongly encourage you to make an appointment with Honors Advisor David.Sailor@asu.edu. Professor Sailor can provide information on opportunities inside the major. He can also explain the thesis process and provide examples of past theses.

Junior Year: Honors students get “priority registration” if they go through the mandatory fifth semester advising with the Barrett Honors College. At this time, we also suggest you meet with Honors Advisor David Sailor to discuss your thesis project ideas and upper division coursework. Dr. Sailor will also help you brainstorm a thesis topic and identify a First and Second Reader for your Honors Thesis. Also sometime during your junior year, you will need to take one of the Thesis Workshop Sessions periodically offered by Barrett. Or, you can do this on-line through a workshop offered through Barrett via ASU Blackboard. Please see details here: http://barrett honors.asu.edu/academics/thesis-and-creative-project/. Drafting your Prospectus by the second semester of your junior year is also highly desirable (see more on the Prospectus below).

Senior Advising: By the start of your last year, you should have formed a committee of a First and Second Readers for your thesis. Students also typically take 492 and 493—as either GPH (for physical/environmental geography or GIS) or GCU (for cultural/human geography) credit—in fall and spring of their last year. If you have not found a suitable thesis advisor, don’t panic. Just email Professor Sailor and he can help you find the best match with your interests.

You should submit an Honors Thesis Prospectus to your Thesis Advisor (First Reader) early in the fall semester—if not earlier—in order to defend in the spring. The Prospectus outlines your thesis topic and plans in about 1 or 2 pages; it should also include your full contact information, a working title, your First Reader (i.e., Thesis Advisor or Committee Chair) and Second Reader, plus a timeline of activities leading up to the planned defense. This prospectus plan should be co-signed by the student and their Thesis Advisor (First Reader) before submission to the Barrett College.
GEOGRAPHY FACULTY AND THESIS OPPORTUNITIES

The faculty members below are especially interested in advising and working with Honors students. Brief bios are provided here to help you identify a thesis topic and/or the First and Second Readers who will oversee your honors thesis. To view the complete list of potential faculty advisors for your Honors Thesis or other activities, you can also visit http://sgsup.asu.edu/about/people/faculty.

Robert (Bob) Balling: Professor Balling welcomes honors contracts and honors theses. Students present their honors contract projects to the entire class, resulting in some very creative presentations.

Randy Cerveny: Past honors theses of students working with Dr. Cerveny include Sports Meteorology, Ball Lightning, and Urban Climate winds, but most students tend to work on problems related to climate change.

Ron Dorn: Professor Dorn welcomes students interested in research related to landforms and also research on geographic education. Honors contracts are a great way to begin to explore different research interests and the research process.

Meagan Ehlenz: Professor Ehlenz focuses on issues of community development and social equity in cities. She welcomes students interested in the dynamics of neighborhood change (How are neighborhoods changing? Who benefits and who doesn’t? What policies/strategies can change those dynamics?), community wealth-building strategies (e.g., community land trusts, housing/worker cooperatives, community economic development), and issues of social equity and diversity.

Stewart Fotheringham: Dr. Fotheringham’s research interests are in the analysis of spatial data sets using statistical, mathematical and computational methods. He is well-known in the fields of spatial interaction modelling and local statistical analysis; the latter as one of the developers of geographically weighted regression (GWR). He has substantive interests in health data, crime patterns, retailing and migration. He is happy to work with honors students with interests in these areas.

Amy Frazier: Dr. Frazier uses GIS, remote sensing, and other spatial data tools to address ecological and conservation issues. She works on applications in both natural and urban environments and welcomes the opportunity to work with honors students on a variety of topics related to land use and land cover change, urban growth patterns, and habitat suitability.

Matt Georgescu: Matt Georgescu: Past honors theses of Barrett honors scholars working with Dr. Georgescu have developed into peer-reviewed publications that have helped catapult individuals into exciting research careers. Broad themes of interest include sustainable cities, urban environments, urban climate and renewable energy. Dr. Georgescu is excited to continue working with students on these and related human-environment interactions.
Mike Kuby: Possible honors thesis topics include transportation, energy, and sustainability. He is currently working on hydrogen fuel cell and battery electric vehicles, stations and drivers; bicycle infrastructure; optimization models for political redistricting and precincts; and the impact of climate change on transportation systems. He focuses on optimizing the infrastructure for more sustainable technologies (such as alternative-fuel station locations and carbon capture and storage pipeline networks) and using GIS, statistics, and survey research to better understand their geographic and behavioral aspects.

Elizabeth (Beth) Larson: Beth Larson welcomes honors projects in all her courses. Topics are wide-ranging, and especially welcome are those involving human rights and social justice in the developing world; global environmental issues; and geography in literature/novels.

Kelli Larson: Dr. Larson welcomes honors thesis topics and projects pertaining to human impacts on and responses to environmental problems. Her interests and expertise specifically focus on urban environmental perceptions, attitudes, and behaviors in relation to landscape design and management as well as biodiversity and wildlife conservation.

Wei Li: Possible honors thesis topics working with Professor Li include: international migration pattern; comparative international migration; highly skilled international migration; asian Americans in the US; asian economic or urban development; financial dynamics of international migration.

Kevin McHugh: is a cultural geographer who teaches the honors course GCU 494: Landscape, Place & Memory, and is keen to work with students on topics relating with space, place, landscape, and movement. Kevin also welcomes honors students with interests in the environmental humanities, posthuman geographies, sensing in cities, and creative geographies in literature, film, and the arts. Kevin has mentored and served on thesis committees for honors students across a range of fields.

Sara Meerow: Professor Meerow’s research focuses on how we can make our cities more sustainable and resilient to climate change and other challenges. She would be happy to work with honors students interested in urban resilience, climate change adaptation, green infrastructure/green space, urban agriculture/gardening, and infrastructure planning in cities across the US or internationally. Research projects could use qualitative, quantitative, or geospatial analysis (GIS) methods.

Soe Myint: Possible honors thesis topics working with Professor Myint include: land use land cover change and prediction, urban and agriculture water use in response to urban heat island and drought, land use land cover in relation to urban warming, land degradation and desertification, urban mapping, vegetation cover mapping, and disaster applications.
**Trisalyn Nelson:** uses GIS and other data science tools to research applied questions in spatial ecology and active transportation. Two topics of particular interest are wildlife movement and cycling safety. Using GPS data and GIS methods, her team is understanding human disturbance changes habitat selection of grizzly bears and other wildlife. As well, her team developed www.BikeMaps.org to crowdsource data on cycling safety. She is actively looking to work with students interested in working on the www.BikeMaps.org project in Tempe and Phoenix. Projects could include technical development, outreach and promotion, or analysis of data.

**Brendán Ó hUallacháin:** Ó hUallacháin works on two sorts of research. The first investigates the transformation of American cities from goods producing centers to generators of inventions and innovations. He does this by statistical analysis of metropolitan variation in patent production. One question he is especially interested in is whether cities are better off having a specialized or a diverse intellectual base. His second area of research is the spatial structure of Sunbelt cities, especially Phoenix. He is especially interested in understanding the spatial distribution of manufacturing, services, retail, and high-technology activities in Phoenix. Honors students with interests in cities and their changing economic and inventive structures are very welcome.

**Martin (Mike) Pasqualetti:** Possible honors projects working with Professor Pasqualetti include: energy, energy/water nexus, renewable energy, energy trade between US and Canada, and energy efficiency.

**Deirdre Pfeiffer:** Professor Pfeiffer welcomes the opportunity to work with honors students interested in topics related to housing, aging, diverse groups, social equity, health, community engagement, and suburbia.

**Matthew Quick:** Dr. Quick's research focuses on the analysis of spatial and spatiotemporal data as applied to place-based issues in urban planning, criminology, urban geography, and health. He would be happy to work with honors students methodological or substantive interests in Geographic Information Science, (spatial) statistics, and social, health, or environmental sciences.

**Erinanne Saffell:** Dr. Saffell welcomes honors contracts in her courses and works with honors thesis topics and projects usually related to aspects of weather and climate, especially extreme weather and climate events and community response.

**David Sailor:** Professor Sailor is an expert on urban climate and the built environment. His research explores the intended and unintended consequences of technologies and strategies for improving urban thermal and air quality environments. He is particularly interested in buildings as mediators of exchange of heat and pollution between indoor and outdoor spaces, and the risks associated with power outages during heat waves. His last three honors students all co-authored peer-reviewed journal papers. Make an appointment to discuss possible thesis topics.
Deborah Salon: Dr. Salon welcomes the opportunity to work with honors students interested in research related to transportation systems. In her research she is especially interested in questions relating to how transportation systems in cities can be improved by making them more environmentally sustainable, more equitable, and more affordable for users. This includes how transportation systems affect other important aspects and functions of cities, such as economic development, real estate markets, and neighborhood livability.

Mark Schmeeckle: Possible thesis topics include: Experiments on sediment transport, surface water, and landform processes in my river dynamics lab. The lab includes a sediment transport flume and a large stream table. Measuring equipment includes an acoustic Doppler velocimeter, a high-speed video system, digital cameras, and lasers to view turbulence, sediment motion, and stream dynamics.

Duncan Shaeffer: Dr. Shaeffer welcomes honors contracts in his courses. His expertise in regional geography makes him an ideal reader on an honors committee where the student is working on a regional issue.

Daoqin Tong: Dr. Tong looks forward to working with honors students. Dr. Tong’s research has mainly focused on the use of spatial analytics including spatial optimization, geographic information system (GIS), and spatial statistics to support urban and regional studies concerning locational decisions, transportation, food access, and public health. Her recent projects include modeling spatial data uncertainty, studying urban food access and urban agriculture, understanding human movement and vector-borne disease spread as well as examining rainwater as potential resource for water independence in desert cities.

Billie L. Turner II: Turner is delighted to work with students on a large variety of human-environmental problems. His own research as examined ancient problems among the Maya and peoples of Mexico, on tropical deforestation and global land changes, and on the design of “urbanscapes” for sustainability, foremost mitigating heat.

Ian Walker: is jointly appointed in the School of Geographical Sciences & Urban Planning and School of Earth & Space Exploration. He is a geomorphologist well known for his work in sediment transport and erosion, aeolian (windblown) geomorphology, coastal geomorphology, environmental fluid dynamics, sand dune ecosystems and restoration, beach-dune morphodynamics, Holocene landscape evolution, and climate change impacts in sedimentary environments. Honors opportunities include research projects in these areas using a combination of fieldwork, existing experimental datasets, high-resolution mapping and spatial change detection using unmanned aerial systems (UAS) or terrestrial laser scanning (TLS), or other topics of interest in geomorphology or sedimentary processes.
Elizabeth (Libby) Wentz: Professor Wentz is happy to work with honors students with interests in using geospatial technologies to better understand residential water and energy use in desert cities. Current cities under investigation are Yuma, Tempe and Phoenix, Arizona and Las Vegas, Nevada. For students interested in international experience, honors theses could involve remote sensing and GIS use in tropical rainforest research.