You want to understand the world. Why not start with a river, a city, a mountain, a village, a road, and follow it to the ends of the earth? Geography asks the big questions — Where? How? Why? What if? — and gives you the perspective to answer them with advanced technology and a solid knowledge of the world in which we all live. Major/Minor in Geography at UNC; explore the world, find yourself. Geography.unc.edu
Navigating the BA in Geography

All Majors take two foundation classes. One course from each of the two columns:

| Geography 110: The Blue Planet: An Introduction to the Earth’s Environmental System | Geography 120: World Regional Geography |
| Geography 121: Geographies of Globalization | Geography 130: Geographical Issues in the Developing World |
| Geography 111: Weather and Climate | |

AND

All Majors Take:

- Geography 370: Introduction to Geographic Information
- Geography 391(Spring): Quantitative Methods in Geography
- Geography 392(Fall): Research Methods in Geography
- Geography 697 (Spring): Capstone Seminar in Geographic Research

AND

All Majors take 12 additional credits (4 courses) in Geography. Three of these must be at or above the 400-level.

Minor in Geography

Minors must take 5 Geography courses. Two from the following list (110, 111, 120, 121, 130) and 3 electives

Pathways

Students are invited to structure their course selections around a sub-field of Geography. Pathways are suggestions for classes in sub-fields but students are not required to choose a pathway. Each pathway has more classes than are listed here and students can consult with the Undergraduate Adviser to choose other related courses. These pathways include (but are not limited to) the following:

- Climatology
- Health and Disease
- Geographic Information Science
- International Development and Globalization
- Diversity and Justice
- Urban Development and Planning
Pathways through the Geography Major

Students are invited to structure their course selections around a sub-field of Geography. Pathways are suggestions for classes in sub-fields but are not requirements. Each pathway has more classes than are listed and students can consult with the Undergraduate Adviser to choose other related courses. These pathways include (but are not limited to) the following:

1. Urban Development and Planning
2. Diversity and Justice
3. Climatology
4. International Development and Globalization
5. GIScience
6. Geography of Health and Disease
Urban Development and Planning

For the first time in human history over half of the world’s population lives in cities. This presents a monumental challenge to politicians, urban planners, and citizens to build sustainable, just, and livable urban spaces. A background in urban geography prepares you for one of the many careers devoted to improving cities and settlements around the globe.

Core Classes
- 228: Introduction to Urban Geography
- 423: Social Geography
- 428: Global Cities
- 429: Experiential learning in Durham
- 430: Migration and Cities
- 458: Urban Latin America
- 542: Neighborhoods and Health

Methods and Research
- Qualitative, Quantitative and GIS skills: 391, 392, 491, 591,
- Research Opportunities: 697 Capstone, Internships, and Independent Study

Minor in City Planning (DCRP)
- 2 required courses
- DCRP 246: Cities of the Future
- DCRP 247: Solving Urban Problems
- 3 DCRP electives

There are career opportunities in city planning, architecture, real estate development, policy analysis, community development, or civil engineering; just to name a few!
Diversity and Justice

How do the places, spaces, and environments that we inhabit reinforce structures of oppression or create the potential for liberation? Social movements and activists have created *spatial* theories and strategies to change the world: by occupying public space or by fighting for the protection of sacred lands. In our classes, you will learn how power flows through space; that all politics unfolds in places; that everyday life is political; and that environmental issues are connected to social justice. You will also learn tools including mapping technologies, remote sensing, oral histories, and interviews.

- 56 FYS: Local Places in a Globalizing World
- 67 FYS: The Politics of Everyday Life
- 225 Space, Place, and Difference
- 228 Urban Geography

- 212 Environmental Conservation and Global Change
- 232 Agriculture, Food, and Society
- 447 Gender, Space, and Place in the Middle East
- 470 Political Ecology
- 480 Liberation Geographies
- 650 Technology and Democracy Workshop

- 491: Intro to GIS
- 541: GIS and Public Health
- 543: Qualitative Methods in Geography
- 591: Applied GIS

Building Blocks

Advanced Courses

Methods
Climatology

The emphasis of this pathway is on developing an understanding of the Earth’s climate system, the impacts of climate on environmental and human sectors, and in gaining quantitative skills that can be used to analyze climate and weather.

Core Classes
- 110: The blue planet or 111: Weather and climate
- 412: Synoptic meteorology
- 414: Climate change
- 416: Applied climatology

Geography Methods & Skills
- 391: Quantitative methods in geography
- 410: Modeling environmental systems

Complimentary Methods and Skills
- Math 231, 232, 383, 416
- Physics 104, 105 or 116, 117
- Statistics 151 or 155
- Computer science 110, 116, or 121

Climate science has growing career opportunities due to renewed interest in current and future climate change. This pathway will position students for non-profit, governmental, and private environmental jobs, as well as for advanced study in climatology.
International Development and Globalization

The “international development and globalization” pathway will prepare you with the practical tools and intellectual framework to become participants and leaders in the world of international development. You might continue your studies in graduate school, work for an international non-governmental organization, pursue a career in diplomacy, or work with social movements. In addition to the building block courses of 120, 121, 123, and 130, the following classes are recommended:

- 259: Latin America
- 265: Eastern Asia
- 266: Southeast Asia
- 267: South Asia
- 268: Africa
- 464: Europe

- 423: Social Geography
- 428: Global Cities
- 460: Economic Change
- 453: Political Geography
- 470: Political Ecology

- 435: Environmental Politics
- 447: Gender in the Middle East
- 448: Muslim Societies
- 452: Mobile Geographies
- 480: Liberation Geography
GIScience

Geographic Information Science (GIScience) emphasizes geographic information technologies, their real-world applications, and the science and technology underlying them. These technologies include geographic information systems (GIS), satellite remote sensing, global positioning systems, computer cartography, terrain analysis, and geospatial visualization. These skills are in high demand, giving students a competitive edge to pursue careers in the private, public, nonprofit sectors.

<table>
<thead>
<tr>
<th>GIScience Courses</th>
<th>GIScience Courses</th>
<th>Courses Outside of Geography</th>
</tr>
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<tbody>
<tr>
<td>• Geog 370: Introduction to Geographic Information</td>
<td>• Geog 577: Advanced Remote Sensing</td>
<td>• COMP 116, 401, 410, &amp; 416: Variety of classes in Programming</td>
</tr>
<tr>
<td>• Geog 391: Quantitative Methods in Geography: Required for GISci Concentration</td>
<td>• Geog 591: Urban GIS</td>
<td>• MATH 231/232: Calculus 1 and Calculus 2</td>
</tr>
<tr>
<td>• Geog 410: Modeling for Environmental Sciences</td>
<td>• Geog 591: Watershed GIS</td>
<td>• MATH 383: Differential Equations</td>
</tr>
<tr>
<td>• Geog 541: GIS in Public Health</td>
<td>• Geog 592: GIS Programming</td>
<td>• MATH 416: Linear Algebra</td>
</tr>
<tr>
<td>• Geog 477: Introduction to Remote Sensing</td>
<td>• Geog 594: Global Positioning Systems and Applications</td>
<td>• ENST 462: Geostatistics for Spatial/Temporal Environmental Phenomenon</td>
</tr>
<tr>
<td></td>
<td>• Geog 595: Ecological Modeling</td>
<td>• ENST 468: Advanced Functions of Temporal GIS</td>
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<tr>
<td></td>
<td>• Geog 491: Introduction to Geographic Information Systems</td>
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</tbody>
</table>
Geography of Health and Disease

Health Geography takes a socio-ecological approach, rather than a biomedical approach to understanding the occurrence of human disease and wellbeing. This is a highly integrated field, requiring knowledge of social systems, environmental systems, and the etiology and ecology of disease. In addition, geospatial technologies such as geographic information systems, satellite remote sensing, and geographic analysis are powerful tools in the study and management of human diseases. This pathway will prepare students for a career in the spatial, social, and ecological dimensions of public health, as well as for graduate school in the spatial health sciences.

Health Courses in Geography

- Geog 434: Cultural Ecology of Disease
- Geog 445: Medical Geography
- Geog 446: Geography of Health Care Delivery
- Geog 451: GIS in Public Health
- Geog 542: Neighborhoods and Health

Geography Methods & Skills

- Geog 232: Agriculture, Food, and Society
- Geog 269: Human-Environment Interactions in the Galapagos Islands
- Geog 391: Quantitative Methods
- Geog 410: Modeling for Environmental Sciences
- Geog 430: Global Migrations
- Geog 450: Population Geography

Classes Outside of Geography

- ANTH 319: Global Health
- BIOL 101: Principles of Biology
- CHEM 101: General Chemistry I
- SOCI 121: Population Problems
- STOR 151: Basic Concepts of Statistics and Data Analysis
- STOR 155: Introduction to Statistics
- STOR 358: Sample Survey Methodology
Student, Alumni, and Faculty Profiles

Geography major Tony Liu at the National Mosque of Malaysia in Kuala Lumpur.

Tony Liu: From Utah to Singapore (via Geography)

A distinguished student and geography major from Utah, Tony Liu’s undergraduate experiences reach far beyond Carolina Hall, from DJ-ing with WXYC 89.3 to interning in California with the solar energy company Sungevity. He is now studying abroad at the National University of Singapore where he is a prestigious Philips Ambassador. In the following interview, edited for length, Liu reflects on why he chose to study here, what he has learned, and where it takes him.

Among other universities you applied to, why did you choose UNC-CH?

I chose UNC-CH for the strong sense of community and place I experienced when visiting during high school. Its location within North Carolina and the South pushes us to challenge ourselves and improve outcomes for society. I love meeting people throughout North Carolina and
hearing about their local communities, stories, and experiences; it adds another element to the educational environment. Also, the people are kind and many are driven by the pursuit of intellectual ideas, values, and a commitment to learning over extrinsic motivations.

Among other majors at UNC, why did you choose Geography?

There are so many reasons to choose Geography at UNC. I love the department and the faculty; each professor has gone out of their way to challenge and support the students, and I have learned a tremendous amount from each course. Geography’s inter-disciplinary nature prevents students from getting complacent in one specific focus and helps catalyze a realization that learning is broad and deep, not limited to a singular realm. Finally, what is more relevant than Geography, as we humans can only exist on this planet? From spatial analysis to reflecting on space and place and scale, geography provides a powerful toolbox to understand the world and critically reflect upon our experiences within it.

What do you bring to geography at UNC? How has studying geography here influenced you?

I bring my identities and experiences to the program and a willingness to engage in dialogue and healthy dissent to the classroom. Studying geography has influenced me not only by teaching the structures and forces that inform our existences, but also by refining my critical thinking and contributing to my capacity to learn in a rapidly changing 21st century world.

Where does a UNC geography major take you, now and in the future?

Studying geography at UNC opens a variety of doors. It expands critical thinking and the capacity to learn. In terms of skills, students focusing on GIS have a variety of job prospects whether they be governmental, business, or academic. Finally, I believe studying geography catalyzes a sense of empathy and humanism—a necessary ability to learn about the modern world from a variety of perspectives.

Is there anything else you’d like to tell us about yourself and your experiences as a geographer?

Studying Geography at UNC-CH is tantamount to embarking on an adventure of self-reflection and growth that makes university education meaningful. It has been one of the few defining elements of my time at UNC-CH, and I could not be more grateful for the field of study, the department, and most importantly, the people within the discipline.

By Dr. Christian Lentz, Geography Faculty
Lily Herbert: Exploring the world and finding herself: Spatial Links between Home and the former USSR

“I had no idea there was a department of geography when I started at UNC” says senior Lily Herbert. Like many geography majors, Herbert happened upon the major when she took her first geography course, a first-year seminar on space, identity, and power in the Middle East. “Courses in geography at UNC incorporated an element of spatial analysis that I found missing in other globally focused social science courses I took,” adds Herbert.

Now a global studies and geography double major, Herbert has used geography to compliment and expand what she learns in other courses. The way geography looks at the intersection of systems, whether they are political or economic, has been the most eye-opening element of geography for Herbert, whose interests (and travels) now focus on the former Soviet Union and international education. Herbert credits the systematic approach of geography for giving her “a solid foundation in world history, politics, and economics.” This foundation has enabled Herbert to connect the local to the global, the individualistic to the systematic, both of which help her find the world in herself.

Key to Herbert’s experience is geographic approaches to power and “how physical space influences its distribution and exercise.” Understanding power from the perspective of geography has made her, in her own words, “more aware of how the world works and has given me the tools to comprehend and define my place in it.” This knowledge has allowed Herbert to connect her background with her experiences in the former Soviet Union as she is able to “understand the power dynamics that shape everyday situations in the US, Russia, and Central Asia.” While she was born and raised in Raleigh, she sees her home connected to the other side of the world. These connections have enabled her “to build relationships with people of other cultures and learn from them while simultaneously realizing more about myself and my own background and culture.”

By Katharine Mather, Geography Major
Adeyemi Olatunde

Lagos to London to Carolina: personal geographies find a resting point and a focus in the department

While international migration is a subject of study in many geography classes at UNC, few students can speak from such personal experience as Adeyemi Olatunde. Having spent the first half of his life in Lagos, Nigeria, Olatunde moved to London at age 11. When the opportunity to study in the US emerged, Olatunde seized it. Having applied to study geography in the UK (where applicants must apply to study a specific subject), he “decided to keep doing geography since I enjoyed it but I was very excited to explore different topics.” His initial plan was only to minor in geography at UNC. But after taking an urban geography class, Olatunde knew “that geography was meant to be my major and cities were meant to be my interest.”

Despite coming from a country where “geography is a common topic and is far from unusual,“ the relatively small size of the geography department offers Olatunde opportunity to connect with professors and classmates and to “bring an international viewpoint” into conversations that open “a much better understanding of how people interact with their world.” For Olatunde, these conversations are increasingly centered on cities, where his international background is especially relevant.

While an interest in cities could find a variety of focuses within geography, Olatunde is most excited about developing a more analytical approach he discovered while taking an introductory GIS course. He hopes to bring these newfound research and analytical skills into other social science fields. “This is what makes geography impactful, the flexibility that it gives you mixed with the right amount of specialization is vital to the way I want to lead my life.” In summer 2016, these skills will come in handy when Olatunde will work with Habitat for Humanity in Atlanta. Afterwards, and into the future, it is this type of experience Olatunde hopes to replicate: working in diverse communities while using his “expertise to support sustainable growth, which can occur through multiple avenues such as health, education, or transportation.”

For now, Olatunde looks forward to finishing his geography major though, he admits, geography may be competing for time with his newly discovered passion: varsity fencing. On guard!

By Katharine Mather, Geography Major
David Crawford, BA, MSc

UNC- National University of Singapore dual degree launches an internationally focused life

For David Crawford, moving around has long been a part of life. Asked where he calls home, Crawford’s first response is “that is a hard question for me” before listing several places (Chapel Hill, perhaps erroneously, doesn’t make this list). Unsurprisingly, his path from UNC to his current home in Brooklyn has been a diverse set of locations and experiences.

Crawford, upon applying for college, was looking for a university that had a strong geography program, a wide-ranging study abroad program, and offered flexibility. Chapel Hill met all these criteria. Crawford's first international experience came from living in Singapore as part of completing the dual degree program in geography from UNC-CH and the National University of Singapore (the program requires spending a minimum of one year studying in Singapore). Though his highlight of the program was his senior honors thesis that spanned into a two-year research project. Focusing on Dhaka, Bangladesh, the project centered on migrant-led NGOs and how organizations can better operate to serve migrant communities. “This experience opened my eyes in ways words cannot do justice,” states Crawford. The project culminated in an academic journal article published in 2014 and jointly written with the department's own Dr. Nina Martin.

In the meantime, Crawford completed an internship in Hungary before gaining a masters degree in International Development from the University of Manchester (that’s now five countries if you’ve been counting). One of Crawford’s most exciting work experiences since graduation was “working with a UN agency on evaluating refugee camps accessibility to the Internet and broadband services.” He was able to utilize his GIS skills and his international experience has allowed him to work well with diverse and global teams. Now living in New York via Washington DC, Crawford works in management consulting at the firm Accenture. Here, Crawford has been able to put his geography skills to unique use. “ I believe my Geography background has allowed me to understand my clients and their problems in a more holistic way as compared to my peers that studies engineering or business.” Such clients are a broad range that include the UN, US government, and “leading Electronics and IT companies.”
Crawford’s current goals include “hoping to better understand Humanitarian Technologies and how humanitarian organizations can better operate and leverage technological innovations to meet the demands and challenges of globalization” and travel. Since entering UNC, he has travelled to over 45 different countries and last year alone flew 60,000 miles- not that we’re keeping score.

Dr. Gabriela Valdivia

For faculty member, bringing an international yet highly localized project to attention at UNC

For many Geography faculty members, their research tends to have a highly local viewpoint yet also highly international outlook by taking the broad and interdisciplinary framework afforded by geography. So when a faculty member says she studies critical resource geography of oil extraction in Ecuador, this doesn’t sound too out of the ordinary. “Critical resource geography pays attention to the relations of power that are part and parcel of the political economy of resources” says the faculty member in question Dr. Gabriela Valdivia.

Valdivia’s research has been focused on “understanding how people who coexist with the infrastructure of the oil complex make sense of life under conditions of capitalistic extraction” from the point of oil extraction in the indigenous Waorani territory in the Amazon to the place of refinery on the coastal city of Esmeraldas. This research is part of a three year collaborative project with Dr. Flora Lu at the University of California at Santa Cruz, after the two were awarded a grant from the National Science Foundation. This project has proven to be so fruitful that the two professors have recently finished a manuscript on the subject with Palgrave-Macmillan under its Latin American Political Economy Series.

This project has allowed Valdivia to go beyond a normal political economy approach and gave her the opportunity “to pay attention to both the material and symbolic dimensions of (resource) circulation, and how they produce regimes of power and knowledge, which often perpetuates inequalities.” Encouraging move varied approaches to resource and environmental research that can lead to new perspectives and knowledge seems to be key goal for Valdivia. As an example, Valdivia explains how critical resource geography is able to pay “attention to how certain forms of knowledge become dominant and hegemonic, and aims to situate these knowledges and practices as historically-produced and thus not guaranteed.” This approach has
allowed Valdivia to find new connections between the oil complex in Ecuador and political resistance and how these vary spatially.

These new approaches are part of a keen interest in political ecology. Valdivia is very interested in establishing a Political Ecology hub for UNC, which naturally will include other geography faculty. The next step will be to “create spaces of cross-disciplinary conversation, through a Speaker series on Political Ecology, that brings people from our campus and other universities to talk about the framework we use, the innovations in teaching, and research we employ to build knowledge on nature-society relations.” This will fit nicely with Valdivia’s new grant-funded project on the “chokepoints” of global capital flows she is completing with anthropologists and geographers.