**Geography Undergraduate Majors Manual**

**Academic Year 2015-2016**



***Updated August 2015***

**Message from the Chair**

Dear Geography Major,

Welcome to the Department of Geography at the University of North Carolina at Chapel Hill. You have made an excellent decision to major in geography! Our department is considered one of the best departments of geography in one of the most highly ranked public universities in the nation. The department represents a diversity of specializations in the physical, technical, and social dimensions of the field. You will have the opportunity to learn from some of the top scholars in a wide range of subfields of geography.

The Geography Faculty takes an interest in each of you as individuals. As you progress through the major, you will enroll in a number of smaller upper-level courses. These courses provide you with the opportunity to get to know individual faculty members. I encourage you to take the time to speak with them after class, visit their office hours to discuss common interests, or arrange to meet for coffee on campus. I personally value many lasting relationships that I have made with students and enjoy keeping in touch with them after they have left UNC.

Please do not hesitate to contact me by email if I can be of assistance to you. I am interested in hearing about what we are doing well and also what we might be able to do better. I also encourage you to take advantage of the resources offered by the staff in Academic Advising, who you should consult regularly concerning degree requirements in the major, as well as our department advisor (Dr. Aaron Moody). In addition, any of our Geography faculty would be delighted to discuss your specific interests in the field of geography and how you might explore them now and in the future.

I also encourage you to investigate the many special opportunities that are available here in the Department of Geography, including our seminar series, the Carolina Geography Club, travel awards, research, and other department activities.

We are delighted that you have joined our department. This manual will introduce you to some of the opportunities and resources that are available to you. I wish you the very best for your remaining years here in Chapel Hill.

Mike Emch

Professor and Chair, Department of Geography

Professor, Department of Epidemiology

Fellow, Carolina Population Center

University of North Carolina at Chapel Hill

205 Carolina Hall

emch@unc.edu

**Message from the Director of Undergraduate Studies**

Dear Geography Major,

We are glad to have you join the Geography department as an undergraduate major. This manual has been prepared to help you with some of the questions most frequently asked by Geography majors and to make you aware of opportunities that you might otherwise miss. The on-line version of this manual will be updated periodically.

The contents of this manual are as follows:

* Geography mission statement
* Facilities and important locations
* Majoring in Geography
* Geography and the General Education Requirements
* Advising
* Geography Department Undergraduate Administration
* Special Courses and Honors in Geography: Geography 293, 295, 296, 691H, 692H
* UNC-BEST Program
* Undergraduate Organizations of Interest to Geography Majors
* Careers in Geography

We hope you will find this manual helpful. If you have questions, suggestions or corrections please share them with me. It is only through continued input from undergraduate students that we can help all of you to find the things you need as a student.

I hope that you will have an enjoyable and productive educational experience in the Department of Geography. Please let me know if I can be of assistance to you.

 Sincerely,

Aaron Moody

Associate Professor

Department of Geography

211 Carolina Hall

aaronm@email.unc.edu

**About the Department of Geography at UNC-Chapel Hill**

**Department of Geography - People and Places**

**Geography Department Faculty**

To learn about our faculty, please see the Faculty Directory on our website: http://geography.unc.edu/people/faculty/. Most faculty offices are on the 2nd or 3rd floor of Carolina Hall, and their mailboxes can be found in Carolina Hall, room 205.

**Geography Department Chair**

Dr. Mike Emch ([emch@unc.edu](mailto:emch@unc.edu)) is Chair of the Department of Geography. His office is Carolina Hall, room 205.

**Geography Buildings: Classrooms / Teaching & Research Laboratories/Offices**

The Department of Geography is housed in the second and third floors of Carolina Hall. Research labs and offices are located in Carolina Hall. Many faculty have offices in other locations on campus as well. Many Geography graduate students have their offices in other buildings on campus, including Coates, Whitehead, and in the CPC.

**Geography Undergraduate Advising Office**

Dr. Aaron Moody ([aaronm@email.unc.edu](mailto:aaronm@email.unc.edu)) is the current departmental advisor for Geography undergraduate majors and minors. His office is Carolina Hall, room 211.

**Geography Administrative Offices**

The Department of Geography Main Administrative Office is located in 205 Carolina Hall. Barbara Taylor ([bktaylor@email.unc.edu](mailto:bktaylor@email.unc.edu)) the lead department administrator and Nell Phillips (nphillip@email.unc.edu) the department administrator in charge of undergraduate affairs are both located here.

**Geography Colloquium**

The department hosts a guest speaker on most Fridays at 3:45 PM. This event is usually held in Carolina 220, but you should consult the colloquium schedule each semester , and stay tuned to the listserv and twitter for announcements about these events. Our speakers are geographers with expertise across the spectrum of the discipline, and come from around the state, region, country and world. Undergraduate majors are encouraged to attend these events as it helps connect with the department and gain exposure to the work that geographers do. Arrive at 3:30 for snacks and to get a seat.

**GIS Cluster in Davis Library**

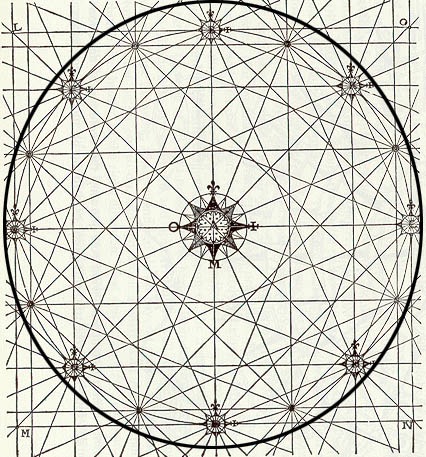
Many Geography Majors will make use of the GIS hardware, software, data, and expertise housed on the 2nd floor of Davis Library in the Research Hub. There are also two extremely well trained GIS librarians at the Davis Library, Amanda Henley and Phil McDaniel.

**Faculty Affiliations and Other Locations Related to Geography**

The Department of Geography is very active in its involvement with other units on campus, so you are likely to find our faculty serving multiple functions at UNC. For example, some of our faculty members direct other units at UNC, such as The Institute for the Environment (Dr. Larry Band, Dir.) and the Center for Galapagos Studies (Dr. Steve Walsh, Dir.). Several of our faculty have joint appointments, are fellows, or are otherwise affiliated with the Curriculum in Ecology, Global Studies, School of Public Health, Carolina Population Center, Institute for the Environment, the Center for Urban and Regional Studies, Institute for the Study of the Americas, The Asia Center, and others.

In addition, we have a vibrant graduate student population in Geography, with approximately 60 PhD and Masters Students in residence. You will likely have met some of them already as TAs in your geography courses at UNC. You are encouraged to talk to them.

**Navigating the BA in Geography**



**All Majors Take ONE OF**: ***AND*** **All Majors Take ONE OF:**

Geography 110:Geography of Geography 120: World

Environmental Systems Regional Geography

Geography 111: Weather and Geography 121: People

Climate and Places

Geography 130: Geographic Issues in the Developing

World

***AND***

**All Majors Take All of**:

Geography 370: Introduction to Geographic

Information

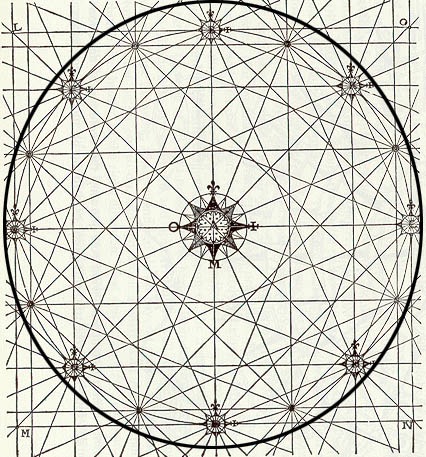
Geography 391(Spring): Quantitative Methods in Geography

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. It is strongly recommended that at least 3 of these be at or above the 400-level.

Students are encouraged to take no more than 3 100-level classes.

It is recommended (but not required) that students take our capstone course, Geography 697, in spring semester of their junior year. This course is oriented towards independent student research, and can be a stepping-stone toward a senior honors thesis in the final year of the major. See the section on Honors in Geography below for more information about the honors thesis.

Students are encouraged to read through the Pathways from the following list that resonate with their personal and professional interests (see Appendix 1 for detail on the Pathways). The Pathways are meant to provide guidance for assembling a curriculum that helps students build strength in more specific areas of interest within Geography. The courses listed in the Pathways are recommendations intended to help guide selection of courses that enhance and support their intellectual and professional development within the field of geography. As an alternative, students may design their own pathway through the department according to their own interests.

NOTE: It is not required that you choose one of these Pathways, and there is at present no designation of them on student diplomas or transcripts. Also, note that it is likely not possible to take all of the courses listed on many of the pathways, but they are presented to provide suitable options.

**Suggested Programs of Study (Pathways) in Geography**

**Pathways**:

* Climatology
* Geography of Health and Disease
* Geospatial Analysis
* International Development and Globalization
* Urban Geography, Planning, and Development

Other potential pathways include those listed below. Discussing these and other pathways with faculty members could be helpful:

* Environmental Systems
* Political Ecology

**Minoring in Geography**

To minor in geography a student must pass a minimum of five courses in geography. These consist of any two of the foundations courses (GEOG 110, 111, 120, 121, 130, 370, 697) and three elective courses. Elective courses may be any on the departmental list, but students are encouraged to pursue elective courses at higher levels (e.g. 300 to 400) and from among the regional courses. Students wishing more information should consult their academic advisor or the director of undergraduate studies in Geography.

**Course Adjustments and Transfer Credit**

The Office of Undergraduate Admissions is responsible for evaluating and awarding transfer credit for enrolling transfer students. In general, credit is awarded for an academic course with a grade of C or better from an accredited institution if Carolina has a similar, equivalent course.

If you're transferring courses from any other institution, see our [Transfer Course Equivalencies](https://www.unc.edu/sis/adm/xfereq.html). Please note this is not an exhaustive list; it reflects transfer credit that former transfer students have received when enrolling at Carolina.

If you want admissions to re-evaluate your transferred credits, you can petition for that via academic advising.

Study Abroad has its own system for handling course substitutions for courses you may have taken during study abroad travel. You should see your study abroad advisor with such requests and have them contact the DUS in Geography with a request on your behalf.

These will be handled on a case-by-case basis.

**Department of Geography Awards for Undergraduate Majors:**

1. **McNally Award for Excellence in Geography**: This is a University of North Carolina Chancellor’s Award, established to honor the memory of Andrew McNally IV, Geography, Class of 1963. The award, which includes formal recognition, an international atlas, and a monetary prize of $500, is bestowed each spring, by the Department of Geography, to a graduating Geography Major who has demonstrated excellence in the field of Geography. The recipient of the McNally Award will have demonstrated outstanding achievement from the standpoint of academic performance, as well as leadership in the discipline, including outreach or service in geographically relevant areas of societal or environmental concern. The selection criteria include GPAs, but the awards committee also looks for engagement with the discipline beyond excelling in the classroom, including involvement in geographic research beyond that required for regular classes, presentation of geographic work in public or professional forums, and leadership and involvement both inside and outside of the classroom. Nominations include a nomination by a faculty member and a resume from the nominee. These should be provided to the Director of Undergraduate Studies by February 15. Nominees will be reviewed by the Undergraduate Awards Committee. Recipients of the McNally award are honored at the annual Chancellor’s Award Ceremony, the only campus wide student recognition ceremony at Carolina. At the beginning of February a list of all likely graduating seniors is distributed to faculty and nominations are solicited from faculty at that time.
2. **Melinda Meade Award for Excellence in Undergraduate Research**: This is a department award honoring the memory of Dr. Melinda Meade, professor of Geography at UNC from 1978 to 2013. This award is granted each year to a student conducting an Honors Thesis in Geography. All students receiving highest honors are automatically nominated for this award. The Undergraduate Awards Committee will read the theses and also attend the honors thesis presentations, which will also be considered in selecting the awardee. The award will be presented each spring at the Geography Graduation Celebration and includes a cash award of $250 and an honorary gift.
3. **J Douglas Eyre Award for Outstanding Leadership**: This is a Geography Department award honoring Dr. J. Douglas Eyre, professor of Geography at UNC from 1957 to 2001. This award is granted to a student demonstrating outstanding leadership relevant to the Geography Department and/or the field of Geography or which otherwise includes a significant geographic element. This may include leadership service and public engagement in geographically situated social or environmental causes. Prospective Awardees must be nominated by the first business day in April. Any faculty, graduate student or undergraduate major may nominate someone for this award, and students may self nominate. Nominations must include a letter explaining why the nominee should be considered for the award. Materials can be provided to the Director of Undergraduate Studies. Nominations will be evaluated by the Undergraduate Awards Committee. The award will be presented each spring at the Geography Graduation Celebration and includes a cash award of $250 and an honorary gift. Nominations are requested
4. **McNair Travel America Fund**
5. **Burgess-McSwain Award**

**Academic Preparation and Support**

**Geography Advising**

Undergraduate students who are majoring in Geography have two major sources of advising. The first is departmental advising, with emphasis on the geography curriculum, career advising, and any concerns you might have about the major. The second is College academic advising (the Geography Department is in the College of Arts and Sciences), located in Steele Building, where students should go to verify overall graduation requirements, update worksheets, etc. Geography majors are under the Division of Social Sciences.

**Geography Departmental Advisor**

Geography Departmental Advising can assist you with any questions you might have regarding the Geography major. Dr. Aaron Moody ([aaronm@email.unc.edu](mailto:aaronm@email.unc.edu)), will be happy to assist you in understanding the major requirements, choosing the courses that fit your interests, guiding you to helpful resources and advising you with any other question about the major or the field.

**Geography Administrator**

Nell Phillips ([nphillips@email.unc.edu](mailto:nphillips@email.unc.edu)) handles the administration for undergraduate majors and minors. Her office is located in 205 Carolina Hall and she is an important resource for you as Geography majors. Nell can assist you with drop/add forms, registration, research forms, and enrollment in special courses. When sending inquiries to Nell, please include your PID number as this helps her to access your records in Connect Carolina.

**Arts and Sciences Advisors**

Geography is officially located in the College of Arts and Sciences. Geography majors will meet with advisors in the Division of Social Sciences, located on the 2nd floor of Steele Building. These advisors provide the official word on curriculum matters. Students are encouraged to make an appointment with an advisor by going to [http://advising.unc.edu/advising/scheduleanappt](http://advising.unc.edu/advising/scheduleanappt" \t "_blank" \o "Schedule an Advising Appointment).

**Advising Worksheets**

Worksheets for Geography and other majors can be found on the Academic Advising website: [http://advising.unc.edu/advising/worksheets-home](http://advising.unc.edu/advising/worksheets-home" \t "_blank" \o "Advising Worksheets). Be sure to check this site for the most recent worksheet applicable to your major, as these forms do change.

**Connect Carolina**

Students are encouraged to access MyUNC (Connect Carolina) for information about grades, eligibility and registration. Consult the Tar Heel Tracker link to double check your academic progress. Caution: Do not rely on Tar Heel Tracker as your sole method of verifying your academic progress. A final analysis of your courses and how they meet the graduation requirements must be completed by a member of the Senior Advising Team located in Steele building prior to graduation. You also have the capability of pulling your own unofficial transcript in Connect Carolina.

**Academic Appeals**

Academic appeals regarding dropping courses past the deadline, medical leaves, and academic probation must be issued by a Dean in Academic Advising or Full-time Advisor. For more information see: <http://advising.unc.edu/AcademicAppealsInfoandForms>

**Geography Departmental Advisor (Geography Director of Undergraduate Studies - DUS)**

While you are probably familiar with the academic advising group at UNC (the advisors who sit in the Steele building), the position of a departmental advisor serves a different goal. I will not replace your advisors from Academic Advising. Instead, as a Geography faculty member, the DUS can to help you with decisions concerning the geography major: which courses should I take if I am interested in health? Or Latin America? Which will be the best courses for me as someone who plans on becoming a GIS specialist? Am I following the requirements for the geography major? Which courses and other activities would help me to prepare myself (and later to apply) for Graduate school?

The DUS is here to help you with these and many other questions and to refer you to the right people as needed. You are invited to meet with the DUS with any concerns you might have about the geography major.

**Geography Major Administrator (Nell Phillips – 205 Carolina Hall)**

Dear Carolina Geography Majors and Minors,

I am here to serve you and to make your experience at Carolina as stress-free as possible!

Here’s what I **can** do for you:

I can answer basic questions regarding our courses – I invite you to check our website first for the most current information regarding our department.

I can register you for a course that shows “Dept Consent” – but I have to have an email from the professor approving this first, as well as any additional required materials such as a form, learning contract, syllabus, etc. .

Here’s what I **can’t** do for you:

I can’t advise you as to what classes to take – you need to see our departmental advisor.

I can’t get you in classes other than Geography classes.

I wish you great success at Carolina and beyond! I look forward to meeting you!

Nell Phillips

Geography Major Administrator

**Internship in Geography**

**GEOG 293**

The purpose of Geography 293 is to allow students to obtain course and experiential education credit for geographical work beyond the classroom. This course is open only to Geography majors. However, **it does not count as a course in the major**. It can only be taken once. The internship in Geography can be in a research setting, or for an outside organization such as local conservation organizations, federal, state, or local government departments, news stations, etc. or it could be in an educational setting such as a museum or national or state park or forest where the emphasis would be on how to communicate information about geography to the public or to students or the public. If appropriate, the student can be paid for the work and also get academic credit.

Before the work is to be done, students must identify and secure an internship and a supervisor who will oversee the student during the internship. The student must contact the DUS in Geography to discuss whether the internship is appropriate for Geog 293 credit and must identify and coordinate with a faculty member from the Department of Geography who will serve as the “Instructor of Record.” The paperwork (learning contract) used to formalize the requirements and expectations for credit must be completed. The student will need to spend 3-4 hours per week on the project per credit hour. The time spent on the internship should be documented by the supervisor and communicated to the instructor of record. At the end of the project the student will write a 10-page paper describing the work on the project in a format to be determined by the supervisor and the instructor of record. The paper must be approved by the supervisor and the instructor of record. The course grade will be determined by the instructor of record in consultation with the internship supervisor. Students are enrolled by the department. An enrollment form is available from Nell Phillips in the main geography office (205 Carolina).

**Undergraduate Research in Geography**

**GEOG 295**

The purpose of Geography 295 is to provide students with research experience while working on a question of current geographical interest. Students will practice research in a particular area of geographic study. Research is done under the supervision of a faculty member in the Department of Geography or in another department on the UNC-Chapel Hill campus. If done in another department, a member of the Geography faculty must agree to monitor the student’s research experience. Students may enroll for 1-3 credit hours of Geography 295. Each credit hour represents 3-4 hours of research per week, on average, during the semester. Students enrolled for 3 credit hours should spend 10 hours or more on research per week.

Students are responsible for contacting faculty in the Department of Geography or in another department on the UNC-CH campus and identifying a faculty member who has agreed to supervise the student’s research. The paperwork (learning contract) used to formalize the requirements and expectations for credit is available from Ms. Phillips. Students must write a 10-page paper describing their research and submit this at the end of each semester. The paper might describe the rationale for the research, the methods used, any results obtained, and any conclusions derived, but the exact format of this paper is to be determined through consultation between the student and research supervisor. It is desirable for this to be in the format of a research article for a scholarly journal. It expected that all requirements by student and faculty will be fulfilled in a timely fashion according to an agreed upon schedule that corresponds with the academic calendar.

To be eligible for Geography 295, students must have an overall GPA of 3.0 or better and have completed Geography certain Geography prerequisites. Geography 295 counts as a course in experiential learning and also counts as a course in Geography for majors. Students are enrolled by the department.

Grades are assigned by the faculty member supervising the research. Three hours of Geography 295 can count as a Geography elective. However, Geography 295 credit can be used to satisfy just *one* Geography elective.

**Independent Study in Geography**

**GEOG 296**

To be eligible for Geography 296, students must have an overall GPA of 3.0 or better and have completed Geog # and #. Geography 296 counts as a course in experiential learning and also counts as a course in Geography for majors. Students are enrolled by the department. An enrollment form is available from Nell Phillips, 205 Carolina Hall. The form requires signatures of the research supervisor and Geography Department sponsor, and a short description of the planned research project.

Students must write a 10-page paper describing their research and submit this at the end of each semester. The paper should describe the rationale for the research, the methods used, any results obtained, and any conclusions derived. It is normally in the format of a journal article from the scientific literature. This paper must be reviewed and approved by the research supervisor and, if applicable, the faculty sponsor from the Department of Geography.

Grades are assigned by the faculty member supervising the research.

**Honors in Geography**

**GEOG 691H/692H**

**Honors in Geography**

Participating in the Geography Honors program (GEOG 691H/692H) will allow you to graduate with Honors or Highest Honors in the Geography major, regardless of whether you are part of the UNC honors program. Prospective Honors students must have a cumulative GPA of 3.3 or higher and a GPA of 3.4 or higher in Geography courses. Honors projects are developed in consultation with a faculty member from Geography and one additional PhD holding committee member. It is the student’s responsibility to identify and coordinate with a faculty member who will mentor them for the honors program.

**Preferably**, the student will have coordinated with their faculty mentor and committee in the spring semester of their Junior Year, and will have applied for a SURF grant, or other summer funding to support their Honors Thesis work.

Prospective honors students must submit an application form (link) signed by their advisor and second reader, and approved by the department honors advisor (DUS). The absolute deadline to submit the application is the end of the first week of classes of the Fall semester of the senior year, but see prior paragraph for the preferred timing. For students graduating in December, it is possible to shift the timing of the thesis work to Spring/Fall as opposed to Fall/Spring. The application should include a syllabus agreed upon by the student and their advisor and outlining a plan of work. A template for the syllabus is available here from Ms. Phillips. Upon approval, the student will be registered by the undergraduate coordinator (Nell Phillips; Rm 205 Carolina Hall).

Honors students must write an honors thesis to be completed by April # (one week before University deadline) and approved by their faculty mentor and one additional committee member, who can be from any department on campus, but must be a PhD member of the UNC community. Graduate students who are ABD may serve as a third reader on undergraduate honors theses, and serve in an advisory role, but may not vote on Pass/Fail or Honors/Highest Honors decisions.

Honors students will present their work to the department at the Spring Undergraduate Research Symposium – The final department colloquium in Spring Semester is reserved for the Undergraduate Research Symposium.

<http://honorscarolina.unc.edu/current-students/honors-thesis-and-undergraduate-research/honors-thesis/>

5.     Rules about committee membership including what the qualifications of any student member should be and that they would need to be a third person who can’t vote.  I think ABD is the minimum but we can bring to the faculty and change later if necessary

6.     Maybe some other stuff about the fact that they shouldideally fill out the application and create a committee before the summer and ideally apply for a SURF.  History requires it [http://history.unc.edu/undergraduate-program/senior-honors-thesis/](http://history.unc.edu/undergraduate-program/senior-honors-thesis/" \t "_blank)

7.     The history page has more info than ours as well so maybe a model but doesn’t have all of the rules either

8.     We should also have a link to the College site as well which is the one that is dead now

9.  The guidelines might say something about our research award too and that it will be based on the presentation and thesis and an awards committee will decide who gets it.

**Undergraduate Organizations of Interest to Geography Majors**

**Gamma Theta Upsilon – The National Geography Honor Society**

UNC’s chapter of Gamma Theta Upsilon, the National Geography Honor Society, welcomes new members.

**The UNC Geography Club**

The UNC Geography Club is organized and run by our majors. See the facebook page: https://www.facebook.com/groups/504841379547883/

**University Career Services**

While this section of the manual will provide broad information about a variety of geography-related careers, you should also make yourself familiar with University Career Services (<http://careers.unc.edu/>). They can help you to explore career options and find internships/part-time jobs relating to your career of interest. They offer advice about careers and help with such matters as writing a resume and having an interview. They also have a library of books that you might find useful to browse for more details/descriptions of jobs in geography-related fields. Their resource room is open Mon – Fri 8:00 am-5:00 pm and contains career-related books, handouts, directories, periodicals, and employer literature.

Please visit the US Department of Labor – US Labor Statistics Report “Occupational Outlook Handbook” for Geography:

<http://www.bls.gov/ooh/life-physical-and-social-science/geographers.htm>

Please also review the Jobs and Careers section of the website for the Association of American Geographers: <http://jobs.aag.org>.

**Public Health**

**Peace Corps**

Since its establishment in 1960, “more than 182,000 Peace Corps Volunteers have been invited by 138 host countries to work on issues ranging from AIDS education, information technology, and environmental preservation.” Knowledge of a foreign language is not a requirement for Peace Corps service, as the Peace Corps provides language training. However, knowledge of a specific language will help qualify an individual for programs in certain regions.  Just the same, knowledge of geography may also qualify an individual for a specific program.

Volunteers of the Peace Corps are provided with an allowance, medical and dental care, and transportation to and from the country of service. All Peace Corps Volunteers commit to 27 months of training and service overseas. During this time, a volunteer earns vacation time. The Peace Corps does not offer short-term assignments. After 27 months of service, a Volunteer receives approximately $6,000 toward his/her transition to life back home. Additionally, Volunteers may defer repayment on student loans under several federal programs and Perkins loans are eligible for a 15 percent cancellation of their outstanding balance for each year of Peace Corps service. Peace Corp recruiters frequent the area often and can be contacted for questions via the Peace Corp website. Source: <http://www.peacecorps.gov/>

**College or University Professor**

This career involves a combination of teaching, research and service. The balance between these activities varies depending on the type of educational institution and type of faculty position. At large research universities, such as UNC-CH, tenure-track professors are expected to teach and to be actively engaged in research. Research experience is usually a prerequisite for admission to a Ph.D. program. Formal teaching experience is obtained during graduate school.

**Environmental Conservation**

Conservation organizations, such as the World Wildlife Fund, the Nature Conservancy, the Sierra Club, Conservation International, and also more local organizations have needs for people with geographic skills, including backgrounds in environmental and social sciences, and geographic information Sciences. Expertise might include the mapping and analysis of spatial data, modeling of spatial processes, knowledge of social dimensions of conservation, and many subfields of environmental science.

Environmental Careers Organization: [www.eco.org](http://www.eco.org) Environmental Career Opportunities: [www.ecojobs.com](http://www.ecojobs.com) Environmental Career Center: [www.environmentalcareer.com](http://www.environmentalcareer.com) Ecological Society of America: [www.esa.org](http://www.esa.org) Environmental Jobs and Careers: [www.ejobs.org](http://www.ejobs.org)

**Careers in the Government**

Several U.S. government agencies, such as the U.S. Department of Interior (USGS, USFWS, NPS, BLM), the U.S. Environmental Protection Agency, and the U.S. Department of Agriculture (USFS, NRCS), staff geographers with expertise and qualifications similar to those of geographers working for environmental conservation organizations (see above). These agencies are involved in managing the nation's public lands and wildlife and in educating the public about the nation's natural resources.

Useful links pertaining to environmental careers in government are:

U.S. Fish and Wildlife Service: [www.fws.gov](http://www.fws.gov) U.S. Environmental Protection Agency: [www.epa.gov](http://www.epa.gov) U.S. Forest Service: [www.fs.gov](http://www.fs.gov) U.S. National Park Service: [www.nps.gov](http://www.nps.gov)

U.S. Natural Resources Conservation Service: [www.nrcs.usda.gov](http://www.nrcs.usda.gov)

**Careers in Environmental Consulting and Planning**

Local, state, and federal agencies staff geographers in their public planning offices and hire private consulting firms that staff their own geographers for spatial analysis of areas potentially affected by a variety of land-use decisions, such as development, restoration, gentrification, greenway development, etc.