



GEOGRAPHY MAJOR & MINOR

ACADEMIC YEAR 2020 - 2021

Undergraduate Program Guide

GEOGRAPHY @ CLARK

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GEOGRAPHY @ CLARK

Geography is the science of place, space, and environment. Each place on earth is distinguished by a unique mix of natural resources, cultural practices, and economic and political systems. Geographers study what makes each place unique, and the connections and interactions between places.

With its highly ranked graduate and undergraduate programs, Clark University is one of the best places in the world to study Geography. As an undergraduate student, you will have the opportunity to work with nationally and internationally known faculty to examine why places are different, how those differences shape how we live, and how we in turn shape our environment. The Geography major and minor at Clark are set up in such a way to give the student a broad understanding of physical and human elements that comprise this field of study.

PROGRAM OVERVIEW

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Use the perspectives of place and space to address societal and environmental challenges

Why are things located where they are? What makes societies and biophysical environments different from place to place? How does location affect access to the things all species need to survive and flourish?

As a geography major you use the concepts of place and space to better understand the physical and social processes that shape our planet. You explore why places are different; the economic, political and cultural systems that connect us locally, regionally and globally; and how we shape—and in turn are shaped by—our environment.

AREAS OF EXPERTISE

Clark's Geography program is generally and broadly broken down into the following four sub-fields:

- Human Environment Geography (also referred to as "nature-society")
 - Analyzes the ways that human societies have used, shaped and constructed nature; impacts of societies, economies and cultures on ecological systems; and societal and environmental consequences of the interaction. (Also referred to as Nature Society). Examples of research and practice: environmental policy and practice, food systems, agriculture, animal geographies, international development, natural resource extraction, water resource management, socio-environmental movements and conflicts, sustainability, land use, vulnerability, environmental change, resilience, hazards, and more.
- Urban Economic Geography
 - Examines the ways that space and location shape economic, sociopolitical and cultural life; ways that economic, sociopolitical and cultural factors shape space and location; and relationships between these processes and the dynamics of urban life. (Also referred to as Globalization, Cities and Development). Examples of research and practice: socio-spatial dynamics of cities, economies, and industries, theories and discourses of economic development, innovation and entrepreneurship, social

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movements, legal geographies, place-making processes, critical social theory, urban politics, globalization, sustainability, political ecology, and more.

- Earth System Science
 - Examines how the Earth system (ecosphere, atmosphere, hydrosphere, and lithosphere) naturally functions, how these systems interact with one another, and how they are affected by humans. Examples of research and practice: terrestrial ecosystems, global change, surface water, cold-region hydrology, terrestrial and marine biogeochemistry, polar climate change, forest ecology, glaciology, landscape and disturbance ecology, and more.
- Geographic Information Science
 - Examines the acquisition, analysis and communication of geographic information; principles and techniques important in cartography, remote sensing, geographic information systems and spatial analysis. Examples of research and practice: conservation GIS, land change modeling, image time series analysis, image classification, decision support, system development, remote sensing of the cryosphere, remote sensing of forest ecosystems, and more.

Students will take courses and explore each of these areas throughout their time in the program.

LOOKING AHEAD

Clark's Fifth Year M.Sc. Accelerated Degree Program (ADP)

Geography offers one of 13 of Clark's fifth year accelerated Master's degree programs: **M.Sc. in GIS**. Eligible undergraduate students often continue their studies after graduation right here in the department, and can earn a Master's degree in GIS in one year, tuition free. To learn more about the M.Sc. in GIS ADP, [visit our website](#) for more information.

GEOGRAPHY MAJOR & MINOR

DECLARING A MAJOR OR MINOR IN GEOGRAPHY

The first step for students considering a major or minor in Geography is to read this guide. The next step is to set up an appointment with the [Program Administrator](#) who will answer any specific questions the student has and work with the student to determine a strong faculty advisor pairing.

Students begin by taking one introductory level course in each of the four most common areas of study in Geography (fulfilling the four Core courses requirement). Generally, after completing the four core courses, students enroll in upper-level, in-depth courses of particular interest to them (four Specialization courses). Geography majors also focus on the development and application of a variety of skills useful in Geographical work and research (through the Skills course and Capstone credit requirements). Students will find that many of their Geography courses involve active participation in research projects and/or hands-on problem-solving activities.

GEOGRAPHY MAJOR REQUIREMENTS [11 COURSES]

- 4 Core Courses
- 1 Skills Course
- 1 Research Methods Course (GEOG 141*)
- 4 Specialization Courses
- 1 Capstone Course/Credit

GEOGRAPHY MINOR REQUIREMENTS [7 COURSES]

- 2 Core Courses
- 1 Skills Course
- 3 Specialization Courses
- 1 Elective Geography Course

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CORE OVERVIEW

(4 courses for Major, 2 courses for Minor)

Core courses emphasize fundamental geographic concepts over four distinct areas of study. Courses in the core are designed to build frameworks for understanding the earth, space, and place in a physical and human context.

We strongly encourage you to take the core courses early in your program, not only because it will give you a more thorough understanding of the different areas of study in Geography, but also because core courses are often prerequisites for 200-level courses.

Majors must select at least one course from each of the following four core areas. Minors must select at least two courses from any of the following four core areas.

- ❖ Human Environment Geography
- ❖ Urban Economic Geography
- ❖ Earth System Science
- ❖ Geographic Information Science (GIS)

SKILLS OVERVIEW

(1 course for Major, 1 course for Minor)

Skills courses give you the opportunity to acquire and apply research, literacy, numeracy, and mapping skills for generating and interpreting knowledge. Our goal is for students to become critical thinkers and to have an understanding of how knowledge is created. Skills courses must be either offered by the Geography Department or offered by other departments with a Geography attribute.

RESEARCH METHODS OVERVIEW

(Required for Major, Not Required for Minor)

Geography 141* Research Design and Methods in Geography is required for the major. **It is advised that you to complete this course before taking 200-level courses in Geography**, preferably during your sophomore year (particularly if you plan to study abroad). Research Methods is offered at least once per year, typically in the spring semester.

Comparable courses in other departments may be subject to substitution for the Geography Research Methods course with the approval of the advisor and the Chair of the Undergraduate Studies Committee. However, this does not reduce the total number of Geography courses required for the

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major. Thus, majors for whom a substitution has been granted will need to take an additional Geography course to ensure that a total of 11 Geography courses are taken. See *Additional Rules* for details on substitutions.

SPECIALIZATION OVERVIEW

(4 courses for Major, 3 courses for Minor)

Specialization courses are a collection of courses that form a coherent combination (a collaborative effort between you and your advisor). Specialization courses give you an opportunity to explore a specific subject area in depth. Majors are required to take four specialization courses, three of which must be at a 200-level and one of which may be either at a 100- or 200-level. The Geography Department also (at times) allows students to perform an internship for credit that can count as a 200-level specialization course, upon approval of the advisor and the University.

It is not a requirement that students determine a specialization within Geography, but it is typically a path followed by many students as they take their core courses and generally become particularly interested in one of the four areas. To specialize in one of the four areas in Geography, students must take their four specialization courses within that subject matter.

For example, if a student wants to specialize in GIS as a Geography major, they would take the following:

- ❖ 4 Core Courses (as normal)
- ❖ 1 Skills Course (GIS related)
- ❖ Research Methods (as normal, GEOG 141)
- ❖ 4 Specialization Courses within the GIS field (indicated on the Course Offerings page)
- ❖ Capstone Credit related to interests within Geography & GIS

Specializing in a subject area within Geography **does not waive the requirement to take a core course in that subject area**. All Geography students must take the 4 core courses (1 in each area) to begin, and then they may continue through the major and choose a specialization if they wish to do so.

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CAPSTONE OVERVIEW

(Required for Major, Not Required for Minor)

One Capstone credit is required for the Geography major. At the university level, a capstone is defined as an experience — a course in the major or an independent project — through which students apply integrative learning. A capstone requires a complex individual or group project that is substantially defined and carried forward by the student and demonstrates accomplishment of Clark's Liberal Education goals, especially a capacity to practice within an academic or professional field effectively.

To meet the Capstone requirement in the Geography major, the student must earn a 200 or 300 level credit that relates to the student's specialization. Consistent with the diversity of topics and methods in the four areas of specialization, Geography students may choose from multiple paths to earning the capstone credit, subject to the approval of their capstone advisor. The student's capstone advisor will help determine how any particular credit satisfies the capstone criteria. The advisor will make this determination based on the purpose of the capstone, which is for the student to integrate content and skills in Geography, as applied to a particular topic.

CAPSTONE TYPES

1. A project completed in a specialization course (200/300 level)
2. Research experience (GEOG 299)
3. Directed Study with a faculty advisor (GEOG 299)
4. Research conducted through the Human Environment Regional Observatory (HERO) program, Forest Ecology Research Lab (FERL) work, Biogeosciences Research Group, Extractive Industries Research Group, or the Polar Science Research Laboratory
5. Internship (GEOG 298)
6. Honors thesis (GEOG 297)

Additionally, Geography 141, required of all majors, trains students in the fundamentals of Research Design and Methods and proposal writing, which broadly prepares students to conceptualize, design and conduct original research relevant to a capstone experience across all four specialization areas.

1. A specialization course (200/300 level)

A number of specialization courses at the 200/300 level fulfill our capstone requirement across our specializations in Human-Environmental Geography (e.g., 5 200-level courses); Urban-Economic Geography (12 200-level courses); Earth System Science (5 200-level courses) and Geographic Information Science (8 200-level courses). Several of these courses have pre-requisites within the respective specialization areas, in which students are expected to have developed relevant topical and methodological knowledge upon which they can build their capstone project.

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2. Research experience (GEOG 299)

Students may enroll in directed study for a research experience during the course of the semester. They may do so via two main avenues:

- a. An individual/independent research project conducted under the supervision of a faculty member. Student typically enroll in GEOG 299 during the completion of the work.
- b. Work done in collaboration with a research group or team, for instance, in which students may contribute as a research assistant. Examples of such projects and research teams include (but are not limited to): Human Environment Regional Observatory (HERO) program; Forest Ecology Research Lab (FERL); Biogeosciences Research Group; Extractive Industries Research Group; and the Polar Science Research Laboratory. Most such research opportunities have a separate, competitive application process. Students accepted into these research teams/groups will be advised on how to register for academic (and capstone) credit.

3. Internship (GEOG 298)

Students completing an on/off campus internship or LEEP project related to their Geography major are encouraged to consider developing a capstone through that planned work. To do so, they must identify a faculty sponsor and apply to the LEEP center for academic credit the semester before the internship commences. The internship must directly contribute to the student's experiential learning relevant to their chosen specialization field. Once the internship is completed, the student should submit a synopsis of their internship experience or other materials as agreed on with their faculty sponsor and the LEEP center.

4. Honors thesis (GEOG 297)

The honors program in Geography provides eligible students with the opportunity to conduct a major independent research project. Honors students must successfully complete a two-semester independent honors project, to be conducted under the supervision of a faculty advisor and one additional faculty member (a second reader), who together constitute the student's honors committee. Honors projects should make an original contribution to geographical knowledge. In crafting the research project and honors thesis, the student will work closely with a faculty supervisor and will also be able to draw upon the advice of their second reader. For further information about the honors program and eligibility criteria, please refer to the Geography honors program guide.

Capstone Form and process: Each student proposing a capstone needs identify a faculty advisor for the Capstone before registration for the 200-level credit and beginning the qualifying activity, the student must complete and submit the Capstone Form under their advisor's guidance. The student and their faculty sponsor sign the form, obtain the Geography program advisor's signature, and submit the

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completed form to the Program Administrator. Towards the end of the semester or upon completion of the capstone work, the form is then updated, signed by all parties and then resubmitted. It is the student's responsibility to coordinate all processes necessary outside of the departmental requirements (i.e. internship registration, any other Clark forms needed, etc.).

All students completing capstones are strongly encouraged to present their work (e.g., as a poster or presentation) during Academic Spree Day or Fall Fest. They are also required to complete the capstone survey following the completion of their capstone, and before graduation.

MINORING IN GEOGRAPHY

Students wishing to minor in Geography must complete a total of seven courses, which constitute a subset of the major. These courses must adhere to the following:

- ❖ Core courses: two courses from two of the four core course areas, student's choice
- ❖ Skills Course: one course required
- ❖ Specialization Courses: three required, with at least two at the 200 level or above
- ❖ Geography Elective: one at any level

ADDITIONAL RULES

Double Counting

If students are double majors, 2 courses may be cross-counted with the Geography major and minor. However, within the program, each Geography course can satisfy only one requirement for the major or minor, meaning that no course can count in two areas toward the major or minor. Geography majors are required to take 11 GEOG courses in accordance with the guidelines.

Double Majors

All majors must complete 11 Geography courses in accordance with the plan described in this guide, even when they have a second major. Two credits at most can count simultaneously for a first and a second major, subject to the approval of the faculty advisor in each department.

Substitutions

All majors must complete 11 "GEOG" courses unless the course is listed in this guide (e.g. IDND 066, ID 296), or if they have received approval from their faculty advisor and the Chair of the Undergraduate Studies Committee to substitute a non-geography course into their program.

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To substitute a non-geography course to count towards a geography requirement, you will need to seek approval of your faculty advisor. In order to do this, you must complete the *Petition to Replace a Geography Requirement* form.

If you have approval to count a non-geography course towards one of your geography requirements, **you are still expected to complete 11 GEOG courses** total, replacing the replacement credit with a geography elective.

Letter Grades

Letter grades of less than C- do not count towards the Geography major or minor.

Pass/Fail

Credits with a grade of "Pass" can count towards the major or minor **only in the case of Internships to fulfill the Capstone requirement**. Other types of credits that are registered as Pass/No Record do not count towards the major or minor.

ADDITIONAL COMPONENTS

RESEARCH / INTERNSHIP CREDITS

Students are urged to take advantage of internship opportunities. Please view our [Careers and Internships website](#), or contact Career Services to learn more about possible opportunities. If students satisfy the requirements for the internship to count as an academic credit at Clark, then the internship can count as a Specialization Course or Capstone toward the Major, subject to the approval of the Advisor.

Career Services can be reached at 508.793.7258 or careers@clarku.edu.

*See also: School of Geography Moodle Page (in *Resources*).

TRANSFER CREDITS

Transfer credits are evaluated on a case-by-case basis for major/minor credit. If you have transferred to Clark from another university, or if you have taken courses elsewhere that you feel should count in place of a major/minor requirement, consult your advisor and they will instruct you on the process.

STUDYING ABROAD

The Geography department encourages students to spend at least one semester studying abroad, which is an added reason to consult your advisor early in your geography program. For more information, contact the Study Abroad office at 508.793.7363 or studyabroad@clarku.edu.

HONORS IN GEOGRAPHY

The Honors Program in Geography gives eligible students the opportunity to conduct a major research project. To graduate with honors, a student must complete a two-semester honors project conducted under the supervision of two faculty members: the honors supervisor who must be a member of Geography, and the honors reader who does not necessarily need to be a member of Geography. Students are encouraged to perform the honors project during the spring semester of the junior year and fall semester of the senior year.

Geography Honors is open to juniors who, by the end of the first semester of the junior year, have a minimum grade point average of 3.25 overall and 3.50 in the Geography major, and can obtain the approval of an honors supervisor and an honors reader.

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For full information on the Honors Program, please view the [School of Geography's Guide to Undergraduate Honors](#). Applications can also be found at the same link.

Additionally, eligible students may choose to join Clark's chapter of **Gamma Theta Upsilon** (GTU), the International Geographical Honors Society. Visit the [GTU website](#) to learn more about the benefits of becoming a member.

DEPARTMENTAL AWARDS & OPPORTUNITIES

The geography department nominates a number of students (juniors and seniors) each year to receive an array of departmentally-funded awards to recognize academic achievement. Additionally, the department nominates and recommends one graduating student for each of the University awards in the appropriate fields. To learn more about this, visit our [website](#).

RESEARCH PRESENTATIONS

Each year, a number of geography students participate in one or more research presentations on and off campus. Students are encouraged to take advantage of these opportunities as they are great platforms for sharing research, networking, and practicing public speaking and presentation skills. Students can also receive Capstone credit for presentations, subject to advisor approval.

- [Fall Fest & Academic Spree Day](#)
- [AAG Conference](#) (American Association of Geographers)
- [NESTVAL](#) (The New England-St. Lawrence Valley Geographical Society)
- [AGU Conference](#) (American Geophysical Union)

DEPARTMENTAL EVENTS

The geography department hosts a number of events each academic year that students of all programs are welcome and encouraged to attend.

- Colloquium Speaker Series
- Annual Wallace W. Atwood Lecture
- Practicing Geography Week

See our [website](#) and Facebook page for updates and listings of upcoming events.

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STUDENT LIFE

Clark Undergraduate Geography Association (CUGA)

CUGA is the voice of Geography, GES, and ESS majors, with student representation on the undergraduate studies committee and the opportunity to attend departmental meetings. CUGA representatives are able to vote and give their ideas and opinions on various topics that concern undergraduate majors. They also attend field trips and periodically have group gatherings to discuss topics of interest such as research, internships, courses and future jobs. If you are interested in joining CUGA, email clarkcuga@gmail.com to learn more.

INTERDISCIPLINARY PROGRAMS

Urban Studies (formerly the Urban Development Social Change (UDSC) Concentration)

The [Urban Studies](#) (formerly the Urban Development Social Change) concentration provides students majoring in any field with a structured program of study that enables them to understand the historical, social, economic and political factors that have shaped U.S. cities and how cities have, in turn, affected the lives of their inhabitants.

Human Environment Regional Observatory (HERO)

The [Human-Environment Regional Observatory](#) program is a unique undergraduate-graduate-faculty experience that engages in research on human-environment relationships in Massachusetts. HERO Fellows conduct hands-on research under the mentorship of Clark University faculty. The research conducted by HERO Fellows often leads to scholarly publications, presentations at academic conferences across the USA, and awards and honors.

RESOURCES

Moodle

The School of Geography Moodle page is a unique resource to all undergraduate students in the department. If you are a Geography/GES/ESS major or minor, you will have access to this page that serves as a hub for online resources, job/internship postings, research opportunities, program materials, event postings, and more.

This page can be accessed by logging into Moodle with your Clark credentials, going to "My Courses", and selecting "GEOG_ug Undergraduate School of Geography". If you are enrolled in one of our programs and you do not see this on your Moodle page, contact the [Program Administrator](#).

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GIS Help Desk

Each year the Geography department hires one or more undergraduate students to staff our GIS Help Desk; a departmental resource that provides free, one-on-one tutoring and guidance to undergraduate and graduate students seeking assistance in GIS programs and applications. The GIS Help Desk is located in the Geography Main Office (Jefferson 220) and runs during the week for set hours. These hours change each semester, so be sure to check our website and Facebook page for the most recent schedule. The Help Desk runs when classes are in session and sometimes during finals, depending on availability of the staff.

Map Library

[The Guy H. Burnham Map & Aerial Photograph Library](#) is an active spatial data information center of global scope. The collection consists of 230,000 maps, 7,800 aerial photographs, 1500 CD-ROMs, as well as atlases, journals, globes, map reference materials, tourist information and monographs (primarily on the subjects of cartography, history of cartography, computerized cartography, map and imagery interpretation, remote sensing and GIS). The library provides service to the faculty, students, and staff of Clark University, as well as the general public throughout New England.

Clark Labs

Since 1987, [Clark Labs](#) has been actively developing the IDRISI GIS and Image Processing software which has been used by professionals in a wide range of industries in more than 180 countries. In 2015, Clark Labs released the TerrSet Geospatial Monitoring and Modeling software which includes the IDRISI GIS and Image Processing tools, along with an additional constellation of software tools for monitoring and modeling the earth system.

Geography Newsletters

The department releases two digital newsletters per year, each of which feature highlights from the previous semester and announcements for upcoming months. These newsletters compile updates from departmental faculty, doctoral students, graduate students, undergraduate students, alumni, and staff, and are available online in our [digital archive](#).

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2020-21 COURSE OFFERINGS

CORE COURSE OFFERINGS

COURSE OFFERINGS ARE SUBJECT TO CHANGE.

HUMAN ENVIRONMENT | CORE COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 017	Environment and Society	J. Getzoff	FA20
GEOG 018	Environment and Development in the Global South	J. Getzoff	SP21
GEOG 106	Water and the City [FYI]	R. Roy Chowdhury	FA20
GEOG 136	Gender and Environment	H. Rosko	FA20

URBAN ECONOMIC | CORE COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 016	Introduction to Economic Geography	J. Murphy	FA20
GEOG 020	American Cities: Changing Spaces, Community Places	A. Best	FA20
GEOG 052	Global Change, Regional Challenges	J. Murphy	INT20
GEOG 157	Psychogeography and Cultural Spaces	M. Davidson	FA19

EARTH SYSTEM SCIENCE | CORE COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 102	Weather and Climate	C. Williams	FA20
GEOG 104	Earth System Science	D. Kulakowski	FA20
GEOG 116	Forest Ecology	D. Kulakowski	FA20
GEOG 119	Arctic in the Anthropocene [FYI]	K. Frey	FA20

GEOGRAPHIC INFORMATION SCIENCE | CORE COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 110	Introduction to Quantitative Methods	L. Estes R. Pontius	FA20 SP21
GEOG 190	Introduction to GIS	J. Guz R. Roy Chowdhury R. Krithivasan Staff	FA20 / SP21 FA20 INT20 SP21

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SKILLS COURSE OFFERINGS

COURSE OFFERINGS ARE SUBJECT TO CHANGE

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 110	Introduction to Quantitative Methods	L. Estes R. Pontius	FA20 SP21
GEOG 141	Research Design and Methods in Geography**	R. Roy Chowdhury Staff	INT20 SP21
GEOG 190	Introduction to GIS	J. Guz R. Roy Chowdhury R. Krithivasan Staff	FA20 / SP21 FA20 INT20 SP21
GEOG 216	Field Methods: Environmental Science	D. Kulakowski	F20
GEOG 242	Everyday Urban Life (Urban Ethnography Lab)	A. Best	SP21
GEOG 246	Geospatial Analysis with R	L. Estes L. Song	FA20 SP21
GEOG 247	Intermediate Quantitative Methods in Geography	R. Pontius	SP21
GEOG 252	Urban Design Research Lab	M. Davidson	FA20
GEOG 260	GIS & Land Change Models	R. Pontius	FA20
GEOG 279	GIS & Map Comparison	R. Pontius	FA20
GEOG 282	Advanced Remote Sensing	J. Rogan	SP21
GEOG 287	New Methods in Earth Observation	M. Cecil	SP21
GEOG 293	Introduction to Remote Sensing	F. Sangermano	FA20
GEOG 296	Advanced Raster GIS	F. Sangermano	SP21
ID 296	Advanced Vector GIS	Y. Ogneva- Himmelberger	FA20

GEOG 141 can be counted as a Skills course **only when a student's Research Methods requirement is fulfilled in another department (subject to approval). Otherwise, a different skills course is required in addition to GEOG 141.

[See the online Academic Catalog for complete Course Listings and Descriptions.](#)

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SPECIALIZATION COURSE OFFERINGS

COURSE OFFERINGS ARE SUBJECT TO CHANGE

HUMAN ENVIRONMENT | SPECIALIZATION COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 259	Global Change, Food and Farming Systems	R. Roy Chowdhury	SP21
GEOG 286	ST: Environmental Politics of the Middle East	J. Getzoff	FA20
GEOG 286	ST: Critical Environmental Histories of the U.S.: Race, Indigeneity, and Nature	J. Getzoff	SP21

URBAN ECONOMIC | SPECIALIZATION COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 242	Everyday Urban Life (Urban Ethnography Lab)	A. Best	SP21
GEOG 248	Social Justice & The City	M. Davidson	SP21
GEOG 252	Urban Design Research Lab	M. Davidson	FA20

EARTH SYSTEM SCIENCE | SPECIALIZATION COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 205	Introduction to Hydrology	C. Williams	FA20
GEOG 216	Field Methods: Environmental Science	D. Kulakowski	FA20
GEOG 263	Climate System & Global Environmental Change	K. Frey	SP21
GEOG 286	ST: Arboretum Research	J. Rogan	FA20

GEOGRAPHIC INFORMATION SCIENCE | SPECIALIZATION COURSES

COURSE #	COURSE TITLE	Instructor	Offered:
GEOG 246	Geospatial Analysis with R	L. Estes L. Song	FA20 SP21
GEOG 247	Intermediate Quantitative Methods in Geography	R. Pontius	SP21
GEOG 260	GIS & Land Change Models	R. Pontius	FA20
GEOG 279	GIS & Map Comparison	R. Pontius	FA20
GEOG 282	Advanced Remote Sensing	J. Rogan	SP21
GEOG 287	New Methods in Earth Observation	M. Cecil	SP21
GEOG 293	Introduction to Remote Sensing	F. Sangermano	FA20
GEOG 296	Advanced Raster GIS	F. Sangermano	SP21
ID 296	Advanced Vector GIS	Y. Ogneva-Himmerlberger	FA20

FORMS & PAPERWORK

In this section you will find a number of forms that you will need throughout your time as a Geography major or minor. Most of these forms are kept for departmental records, but some of them should be submitted to the Registrar's office, etc. Please review the instructions on each form before submitting it.

All forms below are required unless otherwise noted.

MAJOR DECLARATION FORM

This form is used when you are ready to formally declare a major, minor, or concentration. In Geography, if you plan to declare the major, you will first need to have a faculty advisor in the department. If you have questions about this or need help finding a faculty advisor, contact the [Program Administrator](#). If you plan to declare a Geography minor, you do not need to have a faculty advisor.

Once you have obtained your new faculty advisor's signature, return this completed form to the Program Administrator, who will make a copy for departmental records and then will send it over to the Registrar's Office to be processed.

This form can be found on the [Registrar's Website](#), or you can pick one up in the Geography office.

Must be completed by: Undeclared students must declare a major before the second semester of their second year at Clark. Otherwise, if a student is adding Geography as a minor or a second major, there is no specific deadline.

Return to: Program Administrator

Form completed Date Completed: _____

MAJOR/MINOR WORKSHEETS

These worksheets are meant to keep track of your progress throughout your time in the Geography major or minor. The department will keep a copy of this sheet on hand and it is recommended that you update it each semester. This is helpful for advising appointments so that your advisor can see which requirements you have completed and which requirements still remain. We also have electronic Excel spreadsheet versions available upon request.

Return to: Program Administrator

Form completed Date Completed: _____

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CAPSTONE FORM (REQUIRED FOR MAJORS ONLY)

This form is to notify the department of your plans to satisfy the capstone requirement. You should have this form signed twice: once before registering for the credit that will satisfy this requirement, and again before the end of the semester when you are nearing the end of your project. The department will hold onto this form when it is passed in the first time so that you can request it back to have it signed a second time at the end of the semester.

Must be completed by: This form must be completed before registering for the capstone, and then a second time before the last day of the semester in which the credit was taken.

- Form completed (1) Date Completed: _____
- Form completed (2) Date Completed: _____

GRADUATION CLEARANCE FORM

The graduation clearance form is intended to notify the Registrar's Office of your remaining requirements. **All students are required to complete this form once they have registered in 20 units at Clark** (normally happens by the end of the first semester of the third year). This form needs to be signed by your faculty advisor for each major/minor/concentration you are enrolled in.

To complete this form, you should make an appointment with your faculty advisor and bring a copy of your most recent unofficial transcript as well as the most recently completed version of your major/minor worksheet. This will help your advisor see what you have completed, and will also help determine which courses you can plan to take to satisfy your remaining requirements.

Must be completed by: The Registrar's Office will notify you when you are eligible to complete a graduation clearance form. If you do not complete the form by the given deadline, a hold will be put on your account and you will not be able to register for courses for the upcoming semester.

Return to: Registrar's Office (939 Main Street, Room 305 in the Alumni and Student Engagement Center – ASEC)

These forms are not retained by the Geography department. This form can be found on the [Registrar's Website](#), or you can pick one up in the Geography office.

- Form completed Date Completed: _____

RESEARCH/INTERNSHIP CREDIT APPROVAL FORMS (OPTIONAL)

These forms are used if you plan to pursue an internship or research opportunity for academic credit (e.g. to satisfy a capstone requirement). The first step is to read the [Academic Credit Internship Program](#)

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[Description](#), then fill out the [Academic Internship Application](#) online. Next, you will need to download the following forms from the [Career Services](#) website and complete them by the deadline listed: Internship Supervisor Agreement Form, Policies and Procedures Agreement Form, Signatures sheet, and internship timesheet.

Must be completed by: Deadline set on [Career Services](#) website

Return to: Career Services

Forms completed Date Completed: _____

PETITION TO REPLACE A GEOGRAPHY REQUIREMENT (OPTIONAL)

This optional form is necessary only if you plan to petition to include a non-geography course in your geography curriculum. Some examples of when this request would be appropriate:

- 1) if you took a course through another academic department that you would like to count towards a specific geography requirement
- 2) if you are a double major and you took a course that overlaps with a required geography course (e.g. research methods)

This form is subject to the approval of your faculty advisor as well as the Chair of the Undergraduate Studies Committee. It is preferable that you complete this form **before** enrolling in the non-geography course.

Return to: Program Administrator

Form completed Date Completed: _____

CHANGE OF ADVISOR FORM (OPTIONAL)

This optional form is necessary only if you wish to switch to a new faculty advisor within the geography department. This form can be found on the [Academic Advising Website](#), or you can pick one up in the Geography office.

Return to: Program Administrator

Form completed Date Completed: _____

GEOGRAPHY @ CLARK

MAJOR WORKSHEET

To be completed by the student and advisor; kept on file with Program Administrator

STUDENT NAME: _____ EMAIL ADDRESS: _____

INTENDED GRADUATION YEAR: _____ FACULTY ADVISOR: _____

CORE COURSE REQUIREMENTS

CORE CATEGORIES (1 COURSE REQUIRED FROM EACH CORE)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
Human Environment				
Urban Economic				
Earth System Science				
Geographic Information Science				

SKILLS REQUIREMENTS

SKILLS COURSE (1 REQUIRED)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
Skills Elective				

RESEARCH METHODS REQUIREMENT

RESEARCH COURSE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
GEOG 141: Research Methods			

Check this box if the Research Methods requirement was filled by a different course (accepted with advisor approval only), and if so indicate which course: _____

GEOGRAPHY @ CLARK

MAJOR WORKSHEET (Continued)

SPECIALIZATION REQUIREMENTS

Please **circle your specialization area**, or indicate if otherwise. All Specialization courses should be taken within the same category, unless otherwise advised by the student's faculty advisor.

HUMAN ENVIRONMENT

URBAN ECONOMIC

EARTH SYSTEM SCIENCE

GIS

OTHER: _____

SPECIALIZATION COURSES (4 REQUIRED, 3 MUST BE 200-LEVEL)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
100 or 200 Level Course				
200 Level Course				
200 Level Course				
200 Level Course				

CAPSTONE REQUIREMENT

Please **circle the type of Capstone Credit**, or indicate if otherwise. All Capstone credits **must be pre-approved** by the student's faculty advisor before registering for the credit (see Capstone Form on [page 27](#)).

DIRECTED STUDY/RESEARCH WITH FACULTY

UPPER-LEVEL CLARK COURSE

INTERNSHIP

OTHER: _____

CAPSTONE CREDIT TITLE	Course Number & Title (if applicable)	SEMESTER & YEAR COMPLETED

MEETINGS WITH ADVISOR

DATE: _____ NOTES: _____

DATE: _____ NOTES: _____

GEOGRAPHY @ CLARK

MINOR WORKSHEET

To be completed by the student and advisor; kept on file with Program Administrator

STUDENT NAME: _____ EMAIL ADDRESS: _____

INTENDED GRADUATION YEAR: _____ FACULTY ADVISOR: _____

MAJOR/MINOR/CONCENTRATION: _____

CORE REQUIREMENTS

CORE CATEGORIES (2 REQUIRED)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
Human Environment				
Urban Economic				
Earth System Science				
Geographic Information Science				

SKILLS REQUIREMENTS

SKILLS COURSES (1 REQUIRED)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
Skills Elective				

GEOGRAPHY @ CLARK

MINOR WORKSHEET (Continued)

SPECIALIZATION REQUIREMENTS

Please **circle your specialization area**, or indicate if otherwise. All Specialization courses should be taken within the same category, unless otherwise advised by the student's faculty advisor.

HUMAN ENVIRONMENT

URBAN ECONOMIC

EARTH SYSTEM SCIENCE

GIS

OTHER: _____

SPECIALIZATION COURSES (3 REQUIRED, 2 MUST BE 200-LEVEL)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
100 or 200 Level Course				
200 Level Course				
200 Level Course				

ELECTIVE REQUIREMENT

ELECTIVE GEOGRAPHY COURSE (ANY LEVEL)	COURSE NUMBER & TITLE	SEMESTER & YEAR TAKEN	PROFESSOR	GRADE RECEIVED
Elective				

MEETINGS WITH ADVISOR (Optional)

DATE: _____ NOTES: _____

DATE: _____ NOTES: _____

GEOGRAPHY @ CLARK

CAPSTONE FORM

Please submit this completed form to the Program Administrator in the Geography Office **twice: once** before registering for the credit, and **again** after completion of the credit.

STUDENT NAME: _____ EMAIL ADDRESS: _____

INTENDED GRADUATION YEAR: _____ FACULTY ADVISOR: _____

CURRENT LEVEL (at time of first form submission):

- First Year
- Sophomore
- Junior
- Senior

NAME OF 200-LEVEL CREDIT, PROJECT, INTERNSHIP, etc.: _____

INITIAL DATE OF SUBMISSION: __/__/__

SIGNATURE OF PROFESSOR WHO INTENDS TO AWARD THE CREDIT: _____

(Print Name): _____

SIGNATURE OF FACULTY ADVISOR APPROVAL: _____

SIGNATURE OF STUDENT: _____

FINAL DATE OF SUBMISSION: __/__/__

SECOND SIGNATURE OF PROFESSOR WHO HAS AWARDED THE CREDIT: _____

SECOND SIGNATURE OF FACULTY ADVISOR: _____

SECOND SIGNATURE OF STUDENT: _____

This form is meant to stay in departmental files, but may be forwarded to the Registrar's Office for confirmation of the credit. Blank Capstone forms can also be downloaded online or picked up in the Geography Main Office (Jefferson 220).

PETITION TO REPLACE GEOGRAPHY REQUIREMENT

Under extraordinary circumstances, the Chair of the Undergraduate Studies Committee, with consensus from the student's faculty advisor, may approve a non-Geography course to count toward a Geography major or minor requirement. Transfer and study abroad credits must be pre-approved by Academic Advising or the Study Abroad office. Students may be asked to submit course syllabi, papers or materials, or a letter from an advisor/instructor for consideration.

In keeping with Program Guide requirements, **the student must still complete a total of 11 Geography courses.** Please submit this signed form to the Program Administrator. This form should be kept on file with student's Major Worksheet.

STUDENT NAME: _____ ID NUMBER: _____

MAJOR/MINOR/CONCENTRATION: _____

INTENDED GRADUATION YEAR: ____ FACULTY ADVISOR: _____

COURSE SUBSTITUTION (attach any supporting materials or letters)

NUMBER & TITLE OF PROPOSED REPLACEMENT COURSE: _____

INSTRUCTOR NAME: _____ DEPARTMENT: _____

PETITION TO REPLACE THE FOLLOWING GES REQUIREMENT:

- Core Course (00 or 100 level)
- Skills Course
- Research Methods Course (rarely accepted, typically only in cases of double-majors)
- Specialization Course (can be 100 level **only if** student has already taken enough 200-levels)

REASON FOR PETITION: _____

GEOG ELECTIVE COURSE THAT WILL FULFILL THE 11th REQUIREMENT: _____

Student Signature: _____ Date: __/__/__

(This section to be completed by department faculty)

Faculty Advisor Signature: _____ Date: __/__/__

USC Chair Signature: _____ Date: __/__/__

APPROVED DENIED

GEOGRAPHY @ CLARK



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Cover Image by [Mio Sallanto](#)

"Geography nurtures a unique way of seeing our world. It bridges science and social science, the physical and human worlds, the local and global, the verbal and visual, the quantitative and qualitative. Maybe that's why so many professionals I meet say that if they could do it over again, they'd study geography."

Anthony Bebbington, Professor, Graduate School of Geography