

GEOGRAPHY

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| Graduate Program Head | Brian King |
| Program Code | GEOG |
| Campus(es) | University Park (Ph.D., M.S.) |
| Degrees Conferred | Doctor of Philosophy (Ph.D.) Master of Science (M.S.) Dual-Title Ph.D. in Geography and African Studies Dual-Title Ph.D. in Geography and Climate Science Dual-Title Ph.D. and M.S. in Geography and Demography Dual-Title Ph.D. and M.S. in Geography and Transdisciplinary Research on Environment and Society Dual-Title Ph.D. and M.S. in Geography and Operations Research Dual-Title Ph.D. and M.S. in Geography and Women's, Gender, and Sexuality Studies |
| The Graduate Faculty | View (https://secure.gradsch.psu.edu/gpms/?searchType=fac&prog=GEOG) |

The faculty encourages graduate students to arrange courses of study appropriate to their individual needs and aspirations. Programs in Geography may be directed toward a career in public service, teaching and research, private industry, or one of the many other vocational opportunities open to geographers.

Students typically concentrate their study on topics that fall within the special skills and interests of the faculty. Current specialties include biogeography; cartography; climatology; cultural geography; development studies; economic geography; environmental governance; feminist geography; geo-computation; geographic education; geographic information science; geographic theory; geographic visualization; health geography; human dimensions of global change; landscape ecology; nature and society; political ecology; political geography; population geography; remote sensing; and urban geography.

Our department is organized around the following research clusters: spatial modeling and remote sensing; geospatial big data analytics; environmental change and prediction; justice, ethics, and diversity; population, environment, and governance; and food security and human health.

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<https://gradschool.psu.edu/graduate-admissions/how-to-apply/>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>).

Scores from the Graduate Record Examinations (GRE) are required for admission, as well as a personal statement.

Students with a 3.00 junior/senior grade-point average (on a 4.00 scale) and with appropriate course work in geography or a related discipline will

be considered for admission to the M.S. program or to the five-year Ph.D. program. Applicants with master's degrees from a high-quality graduate program in geography will be considered for admission to the four-year doctoral program. The best-qualified applicants will be admitted up to the number of places that are available for new students. All students are expected to demonstrate breadth across the discipline of geography.

Baccalaureate students must earn a master's degree before they will be considered for admission to the doctoral program.

Degree Requirements

Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

Penn State's graduate program in Geography works with incoming students to design programs tailored to their specific interests and needs. Thus there are few formal requirements and a maximum of opportunities for students to pursue their own interests under the guidance of the faculty. Each student's work is supervised by his or her academic adviser and by a committee consisting of two additional members of the Graduate Faculty for M.S. students. The M.S. program is broadly based. It is designed to provide beginning graduate students with basic training in systematic fields, geographical theory, and research techniques.

The M.S. degree may be earned by completing a thesis or two papers. The thesis option requires completion of at least 30 credits at the 400, 500, 600, and 800 level, with at least 18 credits in the 500 and 600 series, combined. If the two-paper option is elected, the student must earn 35 credits at the 400, 500, or 800 level, with at least 18 credits at the 500 level. The master's papers are usually expanded versions of course or semester papers that are of sufficiently high quality that they can be submitted to scholarly journals. At least one of the papers offered to fulfill the M.S. papers requirement must have been written in connection with a departmental course or seminar.

All M.S. students are required to enroll in the following courses during their first year of residence:

| Code | Title | Credits |
|---|-------------------------------------|---------|
| Required Courses | | |
| GEOG 500 | Introduction to Geographic Research | 3 |
| GEOG 502 | Research Scholarship in Geography | 3 |
| Select at least three of the following: | | 3 |
| GEOG 501A | | |
| GEOG 501B | | |
| GEOG 501C | | |
| GEOG 501D | | |

All M.S. students are required to complete at least one seminar at the 500 level. Supporting courses are chosen in consultation with an entrance committee (in year one) or the adviser (in subsequent years).

Doctor of Philosophy (Ph.D.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<https://gradschool.psu.edu/graduate-education-policies/>)

There are three paths to a Ph.D. One is a five-year Ph.D. with M.S. degree, which is available to students who enter Penn State Geography's graduate program without a master's degree. These students are on an accelerated schedule and earn an M.S. along the way to the Ph.D. The second is a four-year Ph.D., which is available to those students who have already received a master's degree in another program either at Penn State or at another university. The third is an M.S.-to-Ph.D. path, which is available to Penn State Geography M.S. students who decide either to continue into the Ph.D. program after they have started their master's program, or to return for the Ph.D. after having graduated with the M.S. Students on this path are not accelerated and therefore will usually require two years to earn the master's and four years to earn the doctorate.

There is no fixed number of credits; courses are prescribed according to the student's prior experience and academic goals. A student's Ph.D. committee can require reading knowledge and/or demonstrated working knowledge of a foreign language, specialized training in linguistics, or training in computer programming languages, depending on the student's research interest.

All doctoral students are required to enroll in GEOG 500 and GEOG 502 during their first year of residence.

Dual-Titles

Dual-Title Ph.D. in Geography and African Studies

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Geography doctoral students – who are already in the program and who have research and scholarly interests in comparative, sub-regional, national and thematic analyses, environmental change, livelihood systems, socio-economic and political change, and other aspects of African development – may apply to the dual-title doctoral degree program in African Studies. The goal of the dual-title program is to enable graduate students from Geography to complement their knowledge and skills in a major area of geographic specialization with in-depth knowledge of prevailing theories and problem-solving approaches to thematic, regional, or national issues pertaining to African Studies.

The dual-title degree program will provide interested Geography doctoral students with a multidisciplinary approach that will enhance their analytical capabilities for addressing key issues in African development and broad aspects of livelihood change. It thereby will add value to their Geography degree and increase their competitiveness in the job market. The well-rounded, regional specialist who graduates from the program is likely to be employed in an international setting. The program has the potential, therefore, to enhance the reputation of the Geography Department, the College of Earth and Mineral Sciences, the College of the Liberal Arts, and Penn State.

Admission Requirements

Students must apply and be admitted to the graduate program in Geography and The Graduate School before they can apply for admission to the dual-title degree program. Applicants interested in the dual-title degree program may make their interest in the program known clearly on their applications to Geography and include remarks in their statement of purpose that address the ways in which their research and professional goals in Geography reflect an interest in African Studies-related research.

To be enrolled in the dual-title doctoral degree program in African Studies, a student must submit a letter of application and transcript, which will be reviewed by the African Studies Admissions Committee. Refer to the Admission Requirements section of the African Studies (<http://bulletins.psu.edu/graduate/programs/majors/african-studies/>) Bulletin page. Students must apply for enrollment into the dual-title degree program in African Studies prior to taking their qualifying examination.

Academic Advisers and Course Selection

To qualify for the dual-title degree, students must satisfy the requirements of the Geography graduate program. In addition, students must complete the degree requirements for the dual-title in African Studies, listed on the African Studies Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/african-studies/>). Within this framework, final course selection is determined by the student in consultation with the Geography and African Studies academic advisers.

Upon acceptance into the dual-title degree program by the African Studies admissions committee, the student will be assigned an African Studies academic adviser in consultation with the African Studies director and the African Studies admissions committee.

As a student develops specific scholarly interests, s/he may request a different African Studies adviser from the one assigned by the African Studies admissions committee. The student and the Geography and African Studies academic advisers will establish a program of study that is appropriate for the student's professional objectives and that is in accordance with the policies of the Graduate Council, the Geography graduate program, and the African Studies dual-title graduate degree program.

Requirements for the Geography-African Studies Ph.D.

The Dual-Title Doctoral Degree in Geography and African Studies is awarded only to students who are admitted to the Geography doctoral program and admitted to the dual-title degree program in African Studies. To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Geography, listed in the Degree Requirements section. In addition, students must complete the degree requirements for the dual-title in African Studies, listed on the African Studies Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/african-studies/>). The minimum course requirements for the Dual-Title Ph.D. degree in Geography and African Studies are as follows:

- Completion of all course work and other requirements for the Geography Ph.D.
- 18 credits of Africa-related coursework at the 400-, 500-, or 800-level, of which the following are required:

| Code | Title | Credits |
|---------------------------------------|--|---------|
| AFR 501 | Key Issues in African Studies | 3 |
| Select at least two of the following: | | 6 |
| AFR 532 | Environment and Livelihoods in Africa | |
| AFR 534 | Political Economy of Energy and Extractive Industries in Africa (Oil and Mining) | |
| AFR 537 | Gender, Sexuality and Islam in Africa: Exploring Contemporary Feminist Scholarship | |
| SOC/AFR 527 | Migration, Urbanization, and Policy in the Developing World | |

- As many as 6 of the 18 credits may come from 400-, 500-, or 800-level Geography courses, as approved by the student's Geography and African Studies Program advisers
- The remaining credits can be taken in AFR or in any department other than Geography; of these, no more than 6 credits may be taken at the 400-level and no more than 3 combined credits may come from AFR 596 and GEOG 596
- Communication and foreign language requirements will be determined by the student and the Geography and African Studies advisors in accordance with the existing Geography language requirements

The choice of electives in African Studies is to be proposed by the student and is subject to approval by the Geography and African Studies academic advisors. The suite of selected courses should have an integrated, intellectual thrust that probes a thematic, national, or regional issue and that complements the student's specialty in Geography.

Language Requirement

The language requirement for a student in the dual-title doctoral degree program will be determined by the student and the Geography and African Studies Program advisers in accordance with the existing Geography language requirements.

Qualifying Exam

The qualifying exam in Geography is an oral exam designed to help students to "...think analytically and critically in their field of expertise and to understand and apply ideas from other fields of geography to their research domain" (Geography Graduate Student Handbook 2011-2012, p. 30). The format of the qualifying exam for the dual-title degree student will be unchanged from the existing Geography qualifying exam and will be guided directly by the requirements outlined in the Geography Graduate Student Handbook. The only difference from the Geography qualifying exam will be an explicit African studies component. The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Geography and must include at least one Graduate Faculty member from the African Studies program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Geography and African Studies. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

Ph.D. Committee Composition

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Geography and African Studies dual-title Ph.D. student must include at least one member of the African Studies Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in African Studies, the member of the committee representing African Studies must be appointed as co-chair.

Comprehensive Exam

After completing all course work, doctoral candidates for the dual-title doctoral degree in Geography and African Studies must pass a comprehensive examination that includes written and oral components. Written components will be administered on a student's major Geography subfields and on African Studies. The African Studies representative

on the student's Ph.D. committee will develop questions for and participate in the evaluation of the oral component of the comprehensive examination. The African Studies component of the exam will be based on the student's thematic, national, or regional area of interest and specialization in African Studies.

Dissertation and Dissertation Defense

Ph.D. students enrolled in the dual-title degree program are required to write a dissertation on a topic that reflects their education and research interest in Geography and African Studies. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Dual-Title Ph.D. in Geography and Climate Science

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Climate Science is a field devoted to the study of Earth's climate in the past, present, and future. A particular focus is understanding the effects of human activities (anthropogenic impacts) and natural forcing on climate. The Climate Science dual-title degree program is administered by the Department of Meteorology and Atmospheric Science for the participating graduate programs. The dual-title degree program is offered through participating programs in the College of Earth and Mineral Sciences and, where appropriate, other graduate programs in the University. The program enables students from several graduate programs to gain the perspectives, techniques, and methodologies of Climate Science, while maintaining a close association with major program areas of application.

Admission Requirements

Students must be admitted to Geography and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Climate Science dual-title program. Refer to the Admission Requirements section of the Climate Science Bulletin page. (<https://bulletins.psu.edu/graduate/programs/majors/climate-science/>) Students must be admitted into the dual-title degree program in Climate Science no later than the end of the fourth semester (not counting summer semesters) of entry into the primary Ph.D. program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the Ph.D. degree requirements of the Geography graduate program. In addition, they must satisfy the degree requirements for the dual-title in Climate Science, listed on the Climate Science Bulletin page. (<https://bulletins.psu.edu/graduate/programs/majors/climate-science/>)

The qualifying examination in Geography satisfies the qualifying exam requirement for the dual-title degree program in Climate Science.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Climate Science dual-title doctoral degree student must include at least one member of the Climate Science Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D.

committee is not also a member of the Graduate Faculty in Climate Science, the member of the committee representing Climate Science must be appointed as co-chair. The Climate Science representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in both Geography and Climate Science. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the Geography graduate program, and the Graduate School.

Dual-Title M.S. and Ph.D. in Geography and Demography

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Admission Requirements

Students must apply and be admitted to the graduate program in Geography and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Demography dual-title program. Refer to the Admission Requirements section of the Demography Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/demography/>). Doctoral students must be admitted into the dual-title degree program in Demography prior to taking the qualifying examination in their primary graduate program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Geography, listed in the Degree Requirements section. In addition, students must complete the degree requirements for the dual-title in Demography, listed on the Demography Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/demography/>).

The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Geography and must include at least one Graduate Faculty member from the Demography program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Geography and Demography. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Geography and Demography dual-title Ph.D. student must include at least one member of the Demography Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Demography, the member of the committee representing Demography must be appointed as co-chair. The Demography representative on the student's Ph.D. committee

will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Geography and Demography. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Dual-Title M.S. and Ph.D. in Geography and TRANSDISCIPLINARY RESEARCH ON ENVIRONMENT AND SOCIETY

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Admission Requirements

Students must apply and be admitted to the graduate program in Geography and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the TREES dual-title program. Refer to the Admission Requirements section of the TREES Bulletin page (<https://bulletins.psu.edu/graduate/programs/majors/transdisciplinary-research-environment-society/>). Doctoral students should enroll in a dual-title graduate degree program early in their training, and no later than the end of the fourth semester (not counting summer semesters) of entry into the graduate major program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Geography, listed in the Degree Requirements section. In addition, students must complete the degree requirements for the dual title in TREES, listed on the TREES Bulletin page (<https://bulletins.psu.edu/graduate/programs/majors/transdisciplinary-research-environment-society/>).

The qualifying examination for Geography will satisfy the qualifying exam requirement for the dual-title degree program in TREES. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees, the Ph.D. committee of a Geography and TREES dual-title Ph.D. student must include at least one member of the TREES Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in TREES, the member of the committee representing TREES must be appointed as co-chair. The TREES representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Geography and TREES. Upon completion of the doctoral dissertation, the

candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Dual-Title M.S. and Ph.D. in Geography and Operations Research

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Admission Requirements

Students must apply and be admitted to the graduate program in Geography and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Operations Research dual-title program. Refer to the Admission Requirements section of the Operations Research Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/operations-research/>). Doctoral students must be admitted into the dual-title degree program in Operations Research prior to taking the qualifying examination in their primary graduate program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Geography, listed in the Degree Requirements section. In addition, students must complete the degree requirements for the dual-title in Operations Research, listed on the Operations Research Bulletin page (<http://bulletins.psu.edu/graduate/programs/majors/operations-research/>).

The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Geography and must include at least one Graduate Faculty member from the Operations Research program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Geography and Operations Research. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Geography and Operations Research dual-title Ph.D. student must include at least one member of the Operations Research Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Operations Research, the member of the committee representing Operations Research must be appointed as co-chair. The Operations Research representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Geography and Operations Research. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be

accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Dual-Title M.S. and Ph.D. in Geography and Women's, Gender, and Sexuality Studies

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-titles/>).

Admission Requirements

Students must apply and be admitted to the graduate program in Geography and The Graduate School before they can apply for admission to the dual-title degree program. After admission to their primary program, students must apply for admission to and meet the admissions requirements of the Women's, Gender, and Sexuality Studies dual-title program. Refer to the Admission Requirements section of the Women's, Gender, and Sexuality Studies Bulletin page (<https://bulletins.psu.edu/graduate/programs/majors/womens-gender-sexuality-studies/>). Doctoral students must be admitted into the dual-title degree program in Women's, Gender, and Sexuality Studies prior to taking the qualifying examination in their primary graduate program.

Degree Requirements

To qualify for the dual-title degree, students must satisfy the degree requirements for the degree they are enrolled in Geography, listed in the Degree Requirements section. In addition, students must complete the degree requirements for the dual-title in Women's, Gender, and Sexuality Studies, listed on the Women's, Gender, and Sexuality Studies Bulletin page (<https://bulletins.psu.edu/graduate/programs/majors/womens-gender-sexuality-studies/>).

The qualifying examination committee for the dual-title Ph.D. degree will be composed of Graduate Faculty from Geography and must include at least one Graduate Faculty member from the Women's, Gender, and Sexuality Studies program. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. There will be a single qualifying examination, containing elements of both Geography and Women's, Gender, and Sexuality Studies. Dual-title graduate degree students may require an additional semester to fulfill requirements for both areas of study and, therefore, the qualifying examination may be delayed one semester beyond the normal period allowable.

In addition to the general Graduate Council requirements for Ph.D. committees (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/phd-dissertation-committee-formation/>), the Ph.D. committee of a Geography and Women's, Gender, and Sexuality Studies dual-title Ph.D. student must include at least two members of the Women's, Gender, and Sexuality Studies Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Women's, Gender, and Sexuality Studies, the member of the committee representing Women's, Gender, and Sexuality Studies must be appointed as co-chair. The Women's, Gender, and Sexuality Studies representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Geography and Women's, Gender, and Sexuality Studies. Upon

completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.

Minor

A graduate minor is available in any approved graduate major or dual-title program. The default requirements for a graduate minor are stated in Graduate Council policies listed under GCAC-600 Research Degree Policies (<https://gradschool.psu.edu/graduate-education-policies/>) and GCAC-700 Professional Degree Policies (<https://gradschool.psu.edu/graduate-education-policies/>), depending on the type of degree the student is pursuing:

- GCAC-611 Minor - Research Doctorate (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-611-minor-research-doctorate/>)
- GCAC-641 Minor - Research Master's (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-641-minor-research-masters/>)
- GCAC-709 Minor - Professional Doctorate (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-709-professional-doctoral-minor/>)
- GCAC-741 Minor - Professional Master's (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-700/gcac-741-masters-minor-professional/>)

Student Aid

Graduate assistantships available to students in this program and other forms of student aid are described in the Tuition & Funding (<https://gradschool.psu.edu/graduate-funding/>) section of The Graduate School's website. Students on graduate assistantships must adhere to the course load limits (<https://gradschool.psu.edu/graduate-education-policies/gsad/gsad-900/gsad-901-graduate-assistants/>) set by The Graduate School.

Courses

Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Geography (GEOG) Course List (<https://bulletins.psu.edu/university-course-descriptions/graduate/geog/>)

Learning Outcomes

1. Know: Graduates will demonstrate knowledge of the core theories and methods in geography as well as deeper knowledge of three out of four subfields. Graduates will demonstrate specialized knowledge within their chosen sub-field: Human Geography, Environment-Society, Physical Geography, or Geographic Information Science.
2. Create: Graduates will be able to creatively synthesize theory and literature within their field of specialization. They will be able to generate new ideas and if appropriate formulate hypotheses in geographic knowledge. Graduates will be able to select from a range

of methodological options and create a research framework to provide solutions to geographical problems.

3. Apply: Graduates will be able to carry out independent, original, and ethical research that addresses problems in the subfields of geography.
4. Critical thinking: Graduates will be able to critically analyze work in their field of specialization.
5. Communicate: Graduates will be able to convey ideas or arguments in a professional manner with clear, concise, well-organized papers, proposals, and oral presentations.

Contact

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| Program Website | View (http://www.geog.psu.edu/) |