**UNIVERSITY FACULTY SENATE FORMS**

**Academic Program Approval**

This form is a routing document for the approval of new and revised academic programs. Proposing department should complete this form. For more information, call the Faculty Senate Office at 831-2921.

**Submitted by:** *Tracy DeLiberty* phone number: *x4084*

**Department:** *Geography* email address: *tracyd@udel.edu*

**Date:** *31 July 2012*

**Action:** *Delete concentrations for Geography Ph.D.*

(Example: add major/minor/concentration, delete major/minor/concentration, revise major/minor/concentration, academic unit name change, request for permanent status, policy change, etc.)

**Effective term:**  *14S*

(use format 04F, 05W)

**Current degree:** *PhD*

(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

**Proposed change leads to the degree of:** *same degree*

(Example: BA, BACH, BACJ, HBA, EDD, MA, MBA, etc.)

**Proposed name:** *same name*

Proposed new name for revised or new major / minor / concentration / academic unit

(if applicable)

**Revising or Deleting:**

**Undergraduate major / Concentration:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

(Example: Applied Music – Instrumental degree BMAS)

**Undergraduate minor:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

(Example: African Studies, Business Administration, English, Leadership, etc.)

**Graduate Program Policy statement change:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

(**Must attach** your Graduate Program Policy Statement)

**Graduate Program of Study:** *Geography Ph.D.*

(Example: Animal Science: MS Animal Science: PHD Economics: MA Economics: PHD)

**Graduate minor / concentration:**  *delete concentrations*

**Note: all graduate studies proposals must include an electronic copy of the Graduate Program Policy Document, highlighting the changes made to the original policy document.**

Graduate Program Policy Handbook attached

**List new courses required for the new or revised curriculum. How do they support the overall program objectives of the major/minor/concentrations)?**

(Be aware that approval of the curriculum is dependent upon these courses successfully passing through the Course Challenge list. If there are no new courses enter “None”)

No additional courses are needed. The Department of Geography Master of Science program offers a number of physical geography foundation courses at the 600 level with the addition of regularly supported 600-800 level courses in allied disciplines of Mathematics, Statistics, Marine Science, and Geology. The Department’s Master of Arts program offers a number of human geography foundation courses at the 600 level with the addition of regularly supported 600-800 level courses in allied disciplines such as Energy and Environmental Policy, History, Political Science, Public Policy, and Sociology. The Department also provides a suite of techniques courses in GIS, remote sensing and quantitative methods to complement a student’s methodological emphasis.

**Explain, when appropriate, how this new/revised curriculum supports the 10 goals of undergraduate education:** [**http://www.ugs.udel.edu/gened/**](http://www.ugs.udel.edu/gened/)

**Identify other units affected by the proposed changes:**

(Attach permission from the affected units. If no other unit is affected, enter “None”)

None

**Describe the rationale for the proposed program change(s):**

(Explain your reasons for creating, revising, or deleting the curriculum or program.)

The Department of Geography’s original Ph.D. degree program was a Ph.D. in Climatology. This degree program was substituted for a Ph.D. degree in Geography with two concentrations in climatology and land surface processes. [It should be noted that the Department is submitting a parallel proposal to reinstate the Ph.D. degree in Climatology.] The present proposal is to remove the two concentrations and to refocus the Ph.D. degree to reflect the Department’s broad focus on both physical and human geography. Emphasis will be placed on human-environment interactions that cut across the discipline. Not only is this refocusing consistent with the environmental initiatives emphasized as part of the University’s Path to Prominence, but it will also permit students to conduct cutting-edge geographic research investigating patterns and processes that shape human interactions with the built and natural environments. In addition, this will permit us to expand our program in a way that will allow all (rather than only some) faculty members across the entire Department to contribute to the education of researchers capable of developing effective technological, social, political, and cultural solutions to our environmental challenges as, for example, on the quality of drinking water and its scarcity.

The Department of Geography is undergoing a significant transitional period with respect to the faculty, with two retirement-replacement faculty successfully completed, and several others anticipated within just the next few years. With the additional consideration of the Environmental Cluster hire and the appointment of the new faculty in Environmental Humanities, this is a watershed moment in environmental science and society faculty hiring at the University of Delaware. An important aspect of our proposed restructuring of the Ph.D. in Geography is to make the department, college, and university more attractive to the very best potential candidates for the next generation of faculty positions in all aspects of environmental inquiry at UD.

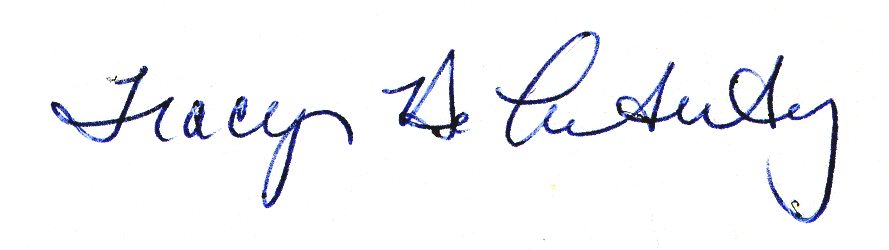
**Program Requirements:**

(Show the new or revised curriculum as it should appear in the Course Catalog. If this is a revision, be sure to indicate the changes being made to the current curriculum and **include a side-by-side comparison** of the credit distribution before and after the proposed change.)

*Current Catalog Proposed Catalog*

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| --- | --- |
| Telephone: (302) 831-2294 <http://www.udel.edu/Geography>  Faculty Listing: <http://www.udel.edu/Geography/faculty.html>  **Program Overview**  The department offers programs leading to the Master of Arts, Master of Science and Doctor of Philosophy degrees in Geography. The graduate program provides the opportunity for students to interact frequently with a staff whose interests touch upon one of three themes: climatology, land-surface processes, and human geography.  The climatology program emphasizes physical, synoptic, dynamic, and water budget climatology. The land-surface processes emphasis includes work on geomorphology, periglacial landforms, permafrost, and flows of water and trace chemicals through the biota and the soil.  The human geography program covers a broad range of themes approached from cultural-historical, socio-economic and humanistic perspectives. All three subareas intersect for work in such areas as sea-ice dynamics and monitoring, glaciology, landscape evidence of climatic change, human influences on climate, climate and human health, and human interactions with the physical landscape. Interdisciplinary work with other departments and colleges is encouraged.  **Research Centers**  The department houses the University's Center for Climatic Research and the Office of the State Climatologist for Delaware. Facilities include laboratories for cartography, microclimatology, biogeography, geographic information science and computer analysis. The department is well-equipped with microclimatic and other fieldwork instrumentation and workstations and related peripherals for GIS and remote sensing work. The department also maintains high-end UNIX servers for modeling and data analysis, good connections to university-wide computing resources, and connections to SURA-Grid for supercomputing needs.  **Requirements For Admission**  General admissions requirements are an undergraduate index of 2.75 or more and combined GRE scores of at least 1050. Admission is selective and competitive based on the number of well qualified applicants and the limits of available faculty and facilities. Those who meet stated minimum academic requirements are not guaranteed admission, nor are those who fail to meet those requirements necessarily precluded from admission if they offer other appropriate strengths. The department will consider qualified applicants without previous background in geography, although additional preliminary work may be required.  **Financial Aid**  Teaching assistantships, research assistantships and University fellowships are available to graduate students at the MA, MS, and PhD levels. In addition, this department regularly assists students in finding fellowships via outside programs, such as NASA or American Meteorological Society fellowships. Please refer to Graduate Fellowships and Assistantships for additional information.  **Requirements For The Master's Degrees**   Students in either master's program complete (with a B average or better) a total of 24 course credits as well as a thesis (6 credits). In general, students in the human geography area will work toward the Master of Arts degree, while climatology and land-surface processes students will pursue the Master of Science. Course work programs are tailored to the student's research interest, and each student's work is periodically reviewed. There is no special examination or language requirement.  It is the responsibility of the student in consultation with the thesis adviser to complete the thesis and to obtain acceptance by the thesis committee. A public presentation of the thesis to the department also is required.  **Requirements For The PhD Degree**  Applicants to the PhD program concentrations in Climatology or Land-Surface Processes are expected to have completed a master's degree in geography, geology, climatology, meteorology, or another related discipline. Students in these concentrations must also have completed mathematics through ordinary differential equations and must demonstrate a knowledge of at least one higher level computer programming language. PhD students are expected to obtain an in-depth knowledge of two areas. One of these must be topical, such as bioclimatology, physical climatology and land-surface processes urban climatology, or climate dynamics for the Climatology concentration, or land-surface measurement, surface process analysis, biogeochemistry, or geomorphology for the Land-Surface Processes concentration. The other area must be methodological such as statistical methods, mathematical modeling, or geographic information science.  Students are also expected to demonstrate a high level of professional competence by passing a written qualifying examination, an oral examination and an oral dissertation defense. More description of the PhD program can be obtained by contacting the Geography Department. | Telephone: (302) 831-2294 <http://www.udel.edu/Geography>  Faculty Listing: <http://www.udel.edu/Geography/faculty.html>  **Program Overview**  The department offers programs leading to the Master of Arts, Master of Science, and Doctor of Philosophy degrees in Geography. Each graduate degree is highly individualized. A student works closely with their advisory committee to design and complete the graduate degree in physical geography, human geography, or coupled human-environment systems.  In physical geography, the Department has a long tradition focusing on climatology, especially physical, synoptic, dynamic climatology, and all phases of water budget cycling. In addition, emphasis is placed on land surface processes, especially glacial and alpine environments, sea-ice dynamics, hydrology and ecosystem linkages. Human Geography covers a broad range of environmental themes approached from cultural-historical, socio-economic and political perspectives. Coupled human-environment systems examines linkages and processes between the biophysical environment and human societies with emphasis in environmental governance, conflicts over increasingly scarce resources, and human dimensions of climate change. Interdisciplinary work is encouraged from across the university and in collaborations with local, national, and international partners.  **Research Centers**   The department houses the Office of the State Climatologist for Delaware, the Delaware Environmental Observing System, the Delaware Geographic Alliance, and research laboratories for developing microclimatological research, hydrologic and dendrochronology studies, as well as computer laboratories in support of geographic information science, remote sensing, videography, and all aspects of data analysis and modeling. Our computational facilities include state-of-the-art networking, data storage capabilities, significant computer-intensive servers for modeling, and connections to SURA-Grid for supercomputing.  **Requirements For Admission to Masters programs**  General admissions requirements are an undergraduate grade point index of 2.75 or more, and a GRE verbal and quantitative score of 300 or higher. Admission is selective and competitive based on the number of well-qualified applicants and the limits of available faculty and facilities. Those who meet stated minimum academic requirements are not guaranteed admission, nor are those who fail to meet those requirements necessarily precluded from admission if they offer other appropriate strengths. Applicants are expected to have completed a previous degree in geography, geology, climatology, meteorology, or another relevant discipline. The department will consider qualified applicants without previous background in geography, although additional preliminary work may be required.  **Requirements For Admission to the Ph.D. program**  General admissions requirements are a graduate grade point index of 3.0 or higher, and GRE verbal and quantitative score of 300 or higher. A prior Master’s degree in Geography is expected. Applicants with degrees from a program other than Geography may be considered if students can demonstrate similar preparation. Admission is highly competitive, based on a careful assessment of each applicant’s background and interest, and accessibility to facilities and other resources.  Applications should state a preference for approaching their studies from a physical, human, or coupled human-environmental systems, and demonstrate their preparation in methodological techniques appropriate to the particular interests of the student. Additional preparation may be required following admission and prior to undertaking a research program to allow students to conduct research in the area of their particular interests.  **Financial Aid**  Teaching assistantships, research assistantships and university fellowships are available to graduate students at the M.A., M.S., and Ph.D. levels. In addition, this department regularly assists students in finding fellowships via outside programs, such as NASA, NOAA, NSF, and American Meteorological Society. Please refer to Graduate Fellowships and Assistantships for additional information.  **Requirements For The Master's Degrees**   Students in either master's program complete (with a B average or better) a total of 24 course credits as well as a thesis (6 credits). In general, students in the human geography area will work toward the Master of Arts degree, while physical geography students will pursue the Master of Science. Students coupling the human-environment systems will work towards either the Masters of Arts or Science given the emphasis of coursework and thesis topic. Course work programs are tailored to the student's research interest, and each student's work is periodically reviewed. There is no special examination or language requirement.  It is the responsibility of the student in consultation with the thesis adviser to complete the thesis and to obtain acceptance by the thesis committee. A public presentation of the thesis to the department also is required.  **Requirements For The Ph.D. Degree**  The Geography Ph.D. degree is a research degree and focuses on specialization and independent scholarship built upon a foundation of geographic knowledge and training. Ph.D. students are expected to obtain an in-depth knowledge of two areas consistent with their emphasis in physical geography, human geography, or human-environmental systems. One of these must be a recognized topical sub-field in the discipline; the other area is methodological, such as statistical methods, mathematical modeling, geographic information science, archival research, or qualitative analysis.  The Doctor of Philosophy degree is awarded chiefly in recognition of high attainment and ability in a specific subfield of geography. This attainment and ability are demonstrated by passing the required examinations covering both a candidate's general and special subfields, and by preparing and successfully defending a dissertation based on original research that makes a significant contribution to knowledge in the student's field.  More description of the Ph.D. program can be obtained online at Geography’s website or by contacting the Geography Department. |

**ROUTING AND AUTHORIZATION:** (Please do not remove supporting documentation.)

Department Chairperson  Date 31 July 2012

Dean of College Date

Chairperson, College Curriculum Committee\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chairperson, Senate Com. on UG or GR Studies Date

Chairperson, Senate Coordinating Com. Date

Secretary, Faculty Senate Date

Date of Senate Resolution Date to be Effective

Registrar Program Code Date

Vice Provost for Academic Affairs & International Programs Date

Provost Date

Board of Trustee Notification Date

Revised 02/09/2009 /khs

**Appendix A: Letters of Participation and Support**

August 7, 2012

To: Tracy DeLiberty

Chair, Department of Geography

From: Gretchen Bauer

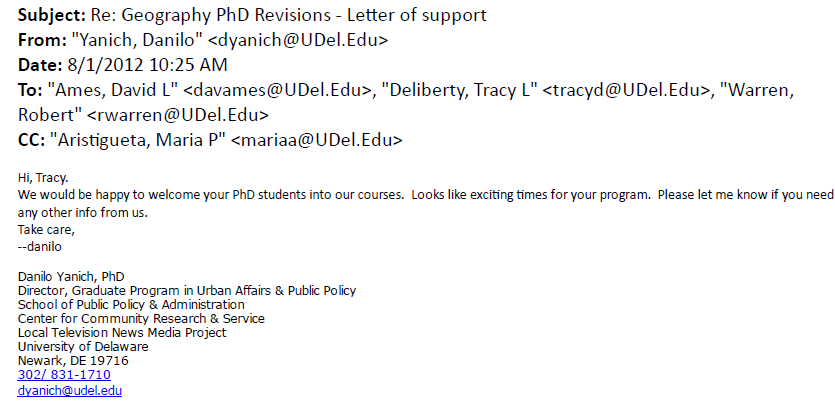
Chair, Department of Political Science and International Relations

Re: Revised PhD in Geography

With this memorandum, I would like to state the support of the Department of Political Science and International Relations for the proposed revisions to the PhD in Geography.

We understand that our Political Science graduate courses will be will be included among a menu of elective courses from which your doctoral students will choose. We will welcome your students in our classes assuming that we have space for them.

We further understand that the PhD in Geography will complement our own PhD program rather than overlap with it in some way.

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