Twin Cities Campus

Quaternary Paleoecology Minor

Department of Earth Sciences

College of Science and Engineering

Link to a list of faculty for this program.

Contact Information:
Quaternary Paleoecology Graduate Program, University of Minnesota, John T. Tate Hall-Suite 150, 116 Church St. SE, Minneapolis, MN 55455 (612-624-7881; fax: 612-625-3819)
Email: qpminor@umn.edu
Website: http://lrc.geo.umn.edu/qpminor/index.html

- Program Type: Graduate free-standing minor
- Requirements for this program are current for Fall 2018
- Length of program in credits (Masters): 6
- Length of program in credits (Doctorate): 12
- This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The faculty of the graduate minor in quaternary paleoecology (QP) hold appointments in several departments. Students in this unique program benefit from the broad range of expertise and experience available at a large research university. From their coursework in the minor, graduate students learn techniques and approaches from other areas that can be applied to their own research.

The minor is available to master's (MA and MS) and doctoral students.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

Other requirements to be completed before admission:
Students must be enrolled in a graduate program (master's or doctoral) at the University of Minnesota.

Special Application Requirements:
Students apply by sending a letter of application to the director of graduate studies (qpminor@umn.edu) as well as a letter of endorsement from their major adviser. Application may be made at any time.

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

The Quaternary Paleoecology minor curriculum is developed in consultation with the major advisor and the Quaternary Paleoecology director of graduate studies. Courses must be from relevant disciplines outside the major field.

Minor Courses

Masters students select at least 6 credits, and doctoral students select at least 12 credits from the following list. Alternative coursework can be applied to the minor with approval from the major advisor and Quaternary Paleoecology director of graduate studies.

ANTH 4077 - Neanderthals: Biology and Culture of Humanity's Nearest Relative (3.0 cr)
ANTH 4329 - Primate Ecology and Social Behavior (3.0 cr)
ANTH 5009 - Human Behavioral Biology (3.0 cr)
ANTH 5015W - Biology, Evolution, and Cultural Development of Language & Music [SOCS, WI] (3.0 cr)
ANTH 5041 *{Inactive}*(3.0 cr)
ANTH 5269 - Analysis of Stone Tool Technology (4.0 cr)
ANTH 5401 - The Human Fossil Record (3.0 cr)

ANTH 5402 - Zooarchaeology Laboratory (3.0 cr)
ANTH 5403 - Quantitative Methods in Biological Anthropology (4.0 cr)
ANTH 5405 - Human Skeletal Analysis (4.0 cr)
ANTH 5442 - Archaeology of the British Isles (3.0 cr)
CEGE 5541 - Environmental Water Chemistry (3.0 cr)
CEGE 5551 - Environmental Microbiology (3.0 cr)
CEGE 8508 - Ecological Fluid Mechanics (4.0 cr)
CEGE 8511 - Mechanics of Sediment Transport (3.0 cr)
CEGE 8551 - Environmental Microbiology: Molecular Theory and Methods (3.0 cr)
CEGE 8552 *{Inactive}*(4.0 cr)
CEGE 8553 *{Inactive}*(3.0 cr)
CEGE 8561 - Analysis and Modeling of Aquatic Environments I (3.0 cr)
CEGE 8562 - Analysis and Modeling of Aquatic Environments II (3.0 cr)
CEGE 8581 - Research and Professional Ethics in Water Resources and Environmental Science (0.5 cr)
CEGE 8601 - Introduction to Stream Restoration (3.0 cr)
CEGE 8602 - Stream Restoration Practice (2.0 cr)
EEB 4329 - Primate Ecology and Social Behavior (3.0 cr)
EEB 4611 - Biogeochemical Processes (3.0 cr)
EEB 5221 *{Inactive}*(3.0 cr)
EEB 5371 - Principles of Systematics (3.0 cr)
EEB 5601 - Limnology (3.0 cr)
EEB 5605 *{Inactive}*(2.0 cr)
EEB 5609 - Ecosystem Ecology (3.0 cr)
ESCI 4102W - Vertebrate Paleontology: Evolutionary History and Fossil Records of Vertebrates [WI] (3.0 cr)
ESCI 4103W - Fossil Record of Mammals [WI] (3.0 cr)
ESCI 4401 - Aqueous Environmental Geochemistry (3.0 cr)
ESCI 4402 - Biogeochemical Cycles in the Ocean (3.0 cr)
ESCI 4602 - Sedimentology and Stratigraphy (3.0 cr)
ESCI 4703 - Glacial Geology (4.0 cr)
ESCI 5102 - Climate Change and Human History (3.0 cr)
ESCI 5201 - Time-Series Analysis of Geological Phenomena (3.0 cr)
ESCI 5204 - Geostatistics and Inverse Theory (3.0 cr)
ESCI 5302 - Isotope Geology (3.0 cr)
ESCI 5601W *{Inactive}*[WI] (4.0 cr)
ESCI 5705 - Limnogeology and Paleoenvironment (3.0 cr)
ESCI 8243 - Principles of Rock Magnetism (1.0 - 3.0 cr)
ESCI 8511 - Mechanics of Sediment Transport (3.0 cr)
ESPM 5402 - Biometeorology (3.0 cr)
FNRM 5131 - Geographical Information Systems (GIS) for Natural Resources (4.0 cr)
FNRM 5153 - Forest Hydrology & Watershed Biogeochemistry (3.0 cr)
FNRM 5203 - Forest Fire and Disturbance Ecology (3.0 cr)
FNRM 5204 - Landscape Ecology and Management (3.0 cr)
FNRM 5205 *{Inactive}*(3.0 cr)
FNRM 5218 - Measuring and Modeling Forests (3.0 cr)
FNRM 5262 - Remote Sensing and Geospatial Analysis of Natural Resources and Environment (3.0 cr)
FNRM 5462 - Advanced Remote Sensing and Geospatial Analysis (3.0 cr)
GEOG 5401W - Geography of Environmental Systems and Global Change [ENV, WI] (3.0 cr)
GEOG 5426 - Climatic Variations (3.0 cr)
GEOG 5431 *{Inactive}*(3.0 cr)
GEOG 5531 - Numerical Spatial Analysis (4.0 cr)
GEOG 5561 - Principles of Geographic Information Science (4.0 cr)
GEOG 5839 - Introduction to Dendrochronology (4.0 cr)
LAAS 5050 - Integrated Topics in Land & Atmospheric Science (3.0 cr)
LAAS 5425 - Atmospheric Processes I: Thermodynamics and Dynamics of the Atmosphere (3.0 cr)
LAAS 5426 - Atmospheric Processes II: Radiation, Composition, and Climate (3.0 cr)
SOIL 4511 - Field Study of Soils (2.0 cr)
SOIL 5555 - Wetland Soils (3.0 cr)
SOIL 8510 - Advanced Topics in Pedology (2.0 - 4.0 cr)
SOIL 8541 *{Inactive}*(3.0 cr)

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may not complete the program with more than one sub-plan.

Masters

Doctoral

Information current as of March 29, 2024