Doctor of Philosophy in the Field of Human Paleobiology

Requirements

Specific admission requirements are shown on the Graduate Program Finder. (http://www.gwu.edu/all-graduate-programs)

The following requirements must be fulfilled:

The general requirements stated under Columbian College of Arts and Sciences, Graduate Programs (http://bulletin.gwu.edu/arts-sciences/#degreeregulationtext).

The requirements for the Doctor of Philosophy program (http://bulletin.gwu.edu/arts-sciences/#doctoraltext).

72 credits.

Recommended Preparatory Courses

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BISC 2207</td>
<td>Genetics</td>
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<tr>
<td>BISC 2208</td>
<td>Genetics Laboratory</td>
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<tr>
<td>BISC 2214</td>
<td>Developmental Biology</td>
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<tr>
<td>BISC 2322</td>
<td>Human Physiology</td>
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<tr>
<td>BISC 2332</td>
<td>Comparative Vertebrate Anatomy</td>
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<tr>
<td>BISC 2450</td>
<td>Organic Evolution</td>
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<tr>
<td>BISC 2451</td>
<td>History of Life</td>
<td></td>
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<tr>
<td>BISC 2452</td>
<td>Animal Behavior</td>
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<tr>
<td>BISC 2454</td>
<td>General Ecology</td>
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Advanced undergraduate courses in biology, including courses in evolution and any two of the following: genetics, developmental biology/embryology, anatomy, physiology, ethology, ecology, and paleontology. GW courses that correspond to these subjects are:

- BISC 2207: Genetics
- BISC 2208: Genetics Laboratory
- BISC 2214: Developmental Biology
- BISC 2322: Human Physiology
- BISC 2332: Comparative Vertebrate Anatomy
- BISC 2450: Organic Evolution
- BISC 2451: History of Life
- BISC 2452: Animal Behavior
- BISC 2454: General Ecology

Advanced undergraduate courses in anthropology, including courses in any two of the following: osteology, human biology, paleoanthropology, primatology, and Paleolithic archaeology corresponding to:

- ANTH 3832: Paleanthropological Field Program
- ANTH 3401: Human Functional Anatomy
- ANTH 3402: Human Evolutionary Anatomy
- ANTH 3403: Forensic Anthropology Laboratory
- ANTH 3404: Human Variation

- ANTH 3412: Hominin Evolution
- ANTH 3411: Primatology
- ANTH 3491: Topics in Biological Anthropology
- ANTH 3801: African Roots from Australopithecus to Zimbabwe
- ANTH 3802: Human Cultural Beginnings

One course in statistics corresponding to:

- STAT 1127: Statistics for the Biological Sciences

One course in mathematics, including precalculus, corresponding to:

- MATH 1220: Calculus with Precalculus I
- MATH 1221: Calculus with Precalculus II

Advanced undergraduate courses in one or more of the following subjects: chemistry, biochemistry, physics, geoscience, and calculus

Doctoral Program

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<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HOMP 6202</td>
<td>Lab Techniques: Paleoanthropology</td>
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<tr>
<td>HOMP 6203</td>
<td>Ethics and Professional Practice I</td>
<td></td>
</tr>
<tr>
<td>HOMP 8301</td>
<td>Problem-Based Learning Seminar</td>
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The following requirements must be fulfilled: 72 credits, including 6 to 24 credits in dissertation research.

Students complete a program of study including a minimum of 48 credits of coursework developed in consultation with the advisor prior to advancing to PhD candidacy.

Required

Foundations core (5 to 7 credits)

- HOMP 6202: Lab Techniques: Paleoanthropology
- HOMP 6203: Ethics and Professional Practice I
- HOMP 8301: Problem-Based Learning Seminar

Modern and paleobiology core (12 credits)

One exemption may be allowed depending upon prior education. Program approval is required.

- ANTH 6407: Anthropological Genetics
- ANTH 6801: Paleolithic Archaeology
- HOMP 6201: Hominid Paleobiology

and one 3-credit course in animal/primate biology, behavior, or ecology such as ANTH 6404, BISC 6206, or another approved course chosen in consultation with the advisor.

Statistical methods core (3 credits)
Doctor of Philosophy in the Field of Human Paleobiology

ANTH 6413 Analytical Methods in Human Evolutionary Studies

or an alternative course selected in consultation with the advisor.

Engagement and application core (9 credits)

HOMP 8302 Public Understand Of Scie Intrn
HOMP 8303 Paleobiology Lab Rotation (taken twice for 3 credits for a total of 6 credits)

Electives

The remainder of credits in coursework selected in consultation with the advisor from among various interdisciplinary courses, including but not limited to, the following:

ANAT 6212 Neurobiology
ANTH 3401 Human Functional Anatomy
ANTH 3408 The Evolution of Human Families
ANTH 3411 Primatology
ANTH 3413 Evolution of the Human Brain
ANTH 3801 African Roots from Australopithecus to Zimbabwe
ANTH 3802 Human Cultural Beginnings
ANTH 6406 Human Genetic Variation
ANTH 6491 Topics in Biological Anthropology
BISC 6210 Methods of Study of Evolution
BISC 6215 Vertebrate Phylogeny
BISC 6228 Population Genetics
BISC 6230 Human Genetics
BISC 6249 Seminar: Developmental Biology
BMSC 8210 Genes to Cells
GEOL 3126 Sedimentology and Stratigraphy
GEOL 3140 Geochemistry
HOMP 6995 Independent Research

or any 6000-level course in ANAT, ANTH, BISC, BIOCHEM, BIOSTAT, CHEM, GEOL, HOMP, PHYS, or PSYC.

Dissertation research (6 to 24 credits)

HOMP 8999 Dissertation Research (6 to 24 credits)

Advanced Requirements

Students must successfully complete general comprehensive examinations, a dissertation proposal defense and examination, and a final dissertation defense and examination.

General examinations prior to PhD candidacy

General examinations must be successfully completed in the third year of the program, prior to advancing to Candidacy. These comprise two written comprehensive examinations, and a dissertation proposal defense and examination.

The first comprehensive examination includes written questions that integrate comprehension across all core thematic areas (hominid paleobiology; paleolithic archaeology; anthropological genetics; and primate biology, behavior, and ecology) and tests foundational knowledge, concepts, theory, and/or methods learned in the core curriculum.

The second comprehensive examination is written in the form of an authoritative review of a chosen topic, including a history of previous relevant research, discussion of theoretical issues, and identification of outstanding questions or directions for future research.

For the dissertation proposal defense, students must prepare a research proposal that meets funding agency guidelines and successfully complete an oral defense and examination of this proposal.

After PhD candidacy

After candidacy, students proceed to completing their doctoral research plan and writing the dissertation. Successful completion of a final dissertation defense and oral examination is required to earn the PhD degree.