

Applied Earth Sciences PhD, IUPUI

Program Guidelines 2012



Applied Earth Sciences PhD Program Requirements

1. PhD Course requirements

Students entering the AES PhD program will come from a range of science backgrounds, but will share a common interest in studying and discovering the interactions between earth processes and humans. This common interest will be built upon by enrollment in some common courses and in a concentration area within the program. Additionally, students will complete a PhD minor in an allied area. Course requirements for individual students are largely at the discretion of the advisor and the student's research committee, who will assess the student's background and academic interests and develop a detailed curricular plan based on this.

1.1 Common Required Core Course

Applied Earth Sciences: The Human Dimension (3 cr.); typically offered in the Fall semester. Explores human interactions with earth science processes, both in terms of response and impact.

Topics include:

(1) Modification of earth surface forms and features

To what extent and by what processes have rock, soil, and coastal forms been modified by humans? What are comparative rates of change and how different from non-human processes?

(2) Modification of global and local hydrologic systems

To what extent and by what processes have surface and subsurface water and ice been modified by humans? What are comparative rates of change and how different from non-human processes?

(3) Modification of global and local atmospheric systems

To what extent and by what processes have gas phase and particulate constituents of the atmosphere been modified by humans? What are comparative rates of change and how different from non-human processes?

(4) Geohazards and individual and population health

How do earth processes (land, air, and water) affect individual and population health, both in positive and negative ways? What are the costs of these impacts? To what extent are these costs avoidable? What are emerging geohazards of concern?

1.2 Course Concentration

Research specialization at the PhD level is supported by concentrations, which provide students with adequate technical expertise to excel in research and to be able to apply defined skills to a wide range of problems in applied earth sciences.

Students must identify a course concentration by the second semester of enrollment in the PhD program. Students must complete five courses within this concentration, with guidance from their research advisor and graduate research committee. A portion of this requirement can be satisfied by previous coursework, upon approval by their graduate research committee. Students

must complete a minimum of nine credit hours of coursework in the IUPUI ES department from among the course topics below.

Water Resources

- Hydrology
- Hydrogeology
- Geomorphology
- Remote Sensing
- Aqueous Geochemistry
- Limnology
- Microbiology

Geochemical Processes

- Environmental Geochemistry
- Soil Geomorphology
- Isotope Chemistry
- Aqueous Geochemistry
- Biogeochemistry
- Limnology
- Microbiology

Physical Earth

- Advanced Earth Materials
- Glacial Geology
- Paleoecology
- Geological Oceanography
- Geomorphology
- Biogeochemistry
- Remote Sensing
- Planetary Geology

1.3 Colloquium Course

All students are expected to attend departmental colloquium presentations, made by local and national/international experts in various areas of applied earth sciences. Students must enroll in Applied Earth Sciences Colloquium (1 cr.) for at least two semesters during their program.

2. PhD Minor

All students must also complete a PhD minor, comprised of 12-15 credit hours of coursework in a related area. This coursework must be independent than the coursework used to satisfy the

concentration requirement. The minor is chosen in consultation with the student's graduate research committee.

3. PhD Examination structure

Students are recommended to submit their research proposal and stand for the oral qualifying exam in their fourth semester, and must do this no later than the end of the fifth semester of enrollment. The oral exam process includes the submission of a substantive written research proposal to their graduate research committee at least two weeks in advance of the examination, followed by an oral defense of that proposal in front of the committee. The committee may ask questions directly related to the research proposal, as well as questions related to the research area that the student is pursuing. After the exam, the committee may decide to pass the student on to candidacy for the Ph.D., provisionally pass the student pending corrections and satisfactory response to questions that arise from the exam, or fail the student. A student failing the qualifying exam may retake it one additional time.

Soon before completion of the program, all students are required to present their results in a public oral dissertation defense.

4. PhD Research Committee

Initially, students will be assigned a graduate advisory committee consisting of three faculty, who will meet with students upon entrance to the program, will review their background, and will make initial judgments on coursework. By the end of the second semester, all students will identify their graduate research committee in consultation with a research advisor. While the advisor is responsible for regular oversight of progress, the graduate research committee will guide the student's research progress via meetings every semester, will serve on the oral exam committee, and will act as reviewers and signers of the PhD dissertation. The graduate research committee will consist of five members, including the research advisor. One of the members (up to a maximum of two) must have a primary faculty appointment outside of the Earth Sciences Department.

IU Graduate School Timeline for PhD Administrative Requirements

All students

- *Submit during first academic term at IUPUI the final transcript of all undergraduate and graduate degrees earned before entry into PhD program
- *Advisory Committee appointment form submitted during first academic year
- *Transfer credits, if any, reported
- *Course substitutions, if any, reported; medical school grades, if any, should be converted to standard A, B, C scale
- *Revalidation of expired coursework, if any, completed
- *Qualifying Examination occurs after coursework (excluding seminars, research, or thesis credits) complete, but at least 8 months before graduation
- *Nomination to Candidacy form submitted after Qualifying Examination passed
- *Nomination of Research Committee form submitted as Candidate enters research phase
- *After 90 credits earned, Candidate may enroll in G901 for 6 semesters
- *All Incomplete and R grades should be removed;
- *Schedule dissertation precheck at least 45 days before defense
- *Defense announcement submitted at least 30 days before defense
- *Dissertation format check after faculty sign off on document
- *Deposit dissertation either in hard copy or electronically
- *Confirm Candidate home address and phone number in OneStart to receive diploma

International students

- *Take EAP placement test before or early in first term
- *Complete any required EAP courses in first academic year
- *Follow all other requirements as noted for all students

IUPUI - GRADUATE CREDIT TRANSFER REPORT

STUDENT NAME: LAST	FIRST	MIDDLE OR INITIAL
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UNIVERSITY ID#	FACULTY ADVISOR	ADMIT DATE / TERM
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ACADEMIC PROGRAM :	ACADEMIC PLAN:	GRADUATION TERM
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NAME OF TRANSFER COLLEGE OR UNIVERSITY:	INST CODE
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ADDRESS OF INSTITUTION: CITY	STATE	OR / COUNTRY
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INCOMING INSTITUTION - ELIGIBLE TRANSFER COURSES						IUPUI SCHOOL/DEPT - EQUIVALENT COURSES				
YEAR/TERM ENROLLED	COURSE TITLE	SCHOOL OR DEPT	COURSE NUMBER	CREDIT HOURS REC'D		COURSE TITLE	CRSE # OR UNDI LEVEL	SCHOOL OR DEPT	CRSE UNDI	CREDIT HOURS APPV'D
1					1				UNDI	
2					2				UNDI	
3					3				UNDI	
4					4				UNDI	
5					5				UNDI	
6					6				UNDI	
7					7				UNDI	
8					8				UNDI	
TOTAL CR HRS AWARDED						TOTAL CR HRS APPROVED				
QUARTERS / SEMESTERS						APPEARS ON IU TRANSCRIPT				

DEPT CHAIR OR PROGRAM DIRECTOR'S SIGNATURE _____ **(LEGIBLE - SIGNATURES - PLEASE)**

AUTHORIZED REPRESENTATIVE'S SIGNATURE _____ TITLE: _____

DEAN'S SIGNATURE: _____ DATE: _____

IUPUI SCHOOL/DEPT: _____ CAMPUS ADDRESS _____ ATTN: _____

FOR RETURNING PROCESSED FORM

LEGIBLE COPY OF "OFFICIAL" TRANSCRIPT (FRONT AND BACK) REQUIRED WITH THE FORM (PLEASE MARK OUT SSN #'S ON COPY FOR SECURITY)

ON (PAGE 2) OR BACK OF FORM ARE **INSTRUCTIONS FOR COMPLETING FORM**

FORWARD TRANSFER CREDIT REPORT TO: IUPUI GRADUATE OFFICE, ADMINISTRATIVE PROCESSING, UNION BLDG - UN207, IUPUI

PROCESSED BY	DATE PROCESSING COMPLETED	FOR ARTICULATION SEMESTER/TERM
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INSTRUCTIONS FOR COMPLETING GRADUATE TRANSFER CREDIT REPORT FORM

- 1) COMPLETE APPROPRIATE SECTIONS OF TRANSFER CREDIT REPORT FOR YOUR SCHOOL/DEPT:
LINE 1 COMPLETE; NAME SECTIONS.
LINE 2 PROVIDE; UNIVERSITY ID#, NAME OF ADVISOR OR STAFF THAT IS REQUESTING THE TRANSFER FOR THE STUDENT, & ADMIT TERM.
LINE 3 STUDENT'S ACADEMIC PROGRAM CODE (I.E. NURS5, BUS5, SWK5, PHST6, LAW7 ETC) & ACADEMIC PLAN CODE (CURRENT PLAN CODE)
INSERT GRADUATION MONTH OR TERM **IF STUDENT IS CURRENTLY IN GRADUATION STATUS** WHEN MAKING THE TR CR REQUEST.
LINES 4 & 5 INSERT NAME AND ADDRESS OF THE COLLEGE/UNIVERSITY FOR THE INCOMING TRANSFER CREDIT(S).
- 2) PROVIDE LEGIBLE COPY OF "OFFICIAL" TRANSCRIPT (FRONT AND BACK) REQUIRED WITH THE FORM (PLEASE MARK OUT SSN #'S ON COPY FOR SECURITY)
- 3) NEW ADMITS FOR AN UPCOMING SEMESTER MUST BE ENROLLED AND ACTIVE IN PROGRAM/PLAN. (TRANSFER CREDIT REPORT FORMS SHOULD NOT BE SENT UNTIL STUDENT BEGINS THEIR FIRST TERM OF PROGRAM'S COURSES. I.E. ADMITTED FOR FALL SEND FORM SEPTEMBER OR LATER)
- 4) CONTINUING OR GRADUATING STUDENT(S) MUST BE ACTIVE (CURRENTLY ENROLLED OR TERM ACTIVATED) TO PROCESS AND POST TRANSFER CREDIT(S).
- 5) TRANSFER CREDIT REPORTS SHOULD BE APPROVED AND PROCESSED BEFORE A STUDENT GRADUATES TO INSURE THE CORRECT NUMBER OF CREDIT HOURS APPEAR ON THE INDIANA UNIVERSITY TRANSCRIPT AWARDING THE DEGREE.
- 6) TRANSFER CREDIT REPORT MUST HAVE AN AUTHORIZED SIGNATURE FOR THE FINAL APPROVAL TO POST INCOMING CREDITS TO STUDENT RECORDS.
- 7) USE A SEPARATE FORM FOR EACH UNIVERSITY OR COLLEGE TRANSFERRING CREDIT TO IUPUI. IF YOU HAVE MORE THAN EIGHT (8) COURSES TO TRANSFER FROM ONE INSTITUTION USE ADDITIONAL FORMS, HAVE ALL FORMS SIGNED, DATED, AND ATTACH FORMS TOGETHER WITH TRANSCRIPT.
- 8) PROVIDE YEAR & TERM (FALL, WINT, SPR, SUMR) COURSE WAS TAKEN, COURSE DESCRIPTION, SCHOOL/DEPT, COURSE NUMBER AND NUMBER OF CREDITS ON THE TRANSFERRING TRANSCRIPT. IF YOU ARE APPROVING A DIFFERENT NUMBER OF CREDITS FOR THE COURSE PLACE # IN THE CREDIT HOURS APPV'D SECTION OF EQUIVALENT COURSE SIDE. UNIVERSITIES/COLLEGES ON "QUARTERS" MUST BE CALCULATED TO SEMESTER HOUR EQUIVALENCE.
- 9) PROVIDE SCHOOL/DEPT, CAMPUS ADDRESS AND NAME OF PERSON TO RETURN THE PROCESSED FORM TO.
- 10) FORMS ARE PROCESSED FOR THE SEMESTER RECEIVED FROM SCHOOLS/ DEPTS (AS THE ARTICULATION TERM) BY IUPUI GRADUATE OFFICE.

GRADUATE SCHOOL/DEPTS. (POLICIES AND APPROVAL)

- 1) GRADUATE SCHOOL TRANSFER CREDIT POLICY TO BE FOLLOWED, REFER TO THE **IU GRADUATE SCHOOL BULLETIN**. GRADES OF "B" OR BETTER ARE ACCEPTABLE - NO PASS/FAIL GRADES. WHEN POSSIBLE PROVIDE EQUIVALENT IU COURSE FOR THE TRANSFER COURSE: UPDATES DEGREE AUDITS AND REFLECTS ADVISOR'S SELECTED EQUIVALENT COURSE(S) ON STUDENT RECORDS. NOTE: GRADUATE STUDENTS EXPECT THEIR STUDENT RECORDS TO BE UPDATED WITH THIS INFORMATION SHOWING ON THEIR TRANSCRIPT.
- 2) TRANSFER CREDIT FORMS ARE TO BE COMPLETED BY THE SCHOOL/DEPT; FACULTY ADVISORS, AND PROGRAM DIRECTORS AND/OR DEPT CHAIR ARE TO REVIEW FOR APPROVAL AND FORWARD TO GRADUATE SCHOOL.
- 3) TRANSFER CREDIT FORMS FOR THE GRADUATE SCHOOL/DEPT(S) ARE TO BE FORWARDED TO THE GRADUATE SCHOOL ASSOCIATE DEAN FOR FINAL APPROVAL & SIGNATURE.

PROFESSIONAL SCHOOLS/DEPTS. (POLICIES AND APPROVAL)

- 1) PROFESSIONAL SCHOOLS/DEPTS SHOULD REFER TO INDIVIDUAL SCHOOL TRANSFER CREDIT POLICY FOR GUIDELINES. WHEN POSSIBLE PROVIDE EQUIVALENT COURSE FOR THE TRANSFER COURSE: UPDATES DEGREE AUDITS AND REFLECTS ADVISOR'S SELECTED EQUIVALENT COURSE(S) ON STUDENT RECORDS. NOTE: GRADUATE STUDENTS EXPECT THEIR STUDENT RECORDS TO BE UPDATED WITH THIS INFORMATION SHOWING ON THEIR TRANSCRIPT.
- 2) AN UPDATED COPY OF THE SCHOOL'S WRITTEN TRANSFER CREDIT POLICY IS TO BE ON FILE AT THE IUPUI GRADUATE OFFICE.
- 3) SCHOOL/DEPTS TRANSFER CREDIT FORMS ARE TO BE PREPARED BY APPROPRIATE SCHOOL FACULTY, ADVISORS OR STAFF AND SIGNED BY THE SCHOOL/DEPT; DEAN OR AUTHORIZED REPRESENTATIVE(S) NAMES AND TITLES ARE TO BE ON FILE AT IUPUI GRADUATE OFFICE.

FORWARD PAPER TRANSFER CREDIT REPORT TO: **IUPUI GRADUATE OFFICE, ADMINISTRATIVE PROCESSING, UNION BLDG-UN207, IUPUI**

ELECTRONIC COPIES MUST BE LEGIBLE TO BE ACCEPTED; FORWARD TO EMAIL GADMPROC@IUPUI.EDU IN SUBJECT LINE INDICATE -TRANSFER CREDIT (WITH SCHOOL NAME)

AUTHORIZED SIGNATURES ARE REQUIRED ON ALL FORMS FOR PROCESSING

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IU GRADUATE SCHOOL COURSE SUBSTITUTION FORM

Student _____

University ID # _____

Academic Major _____

Academic Plan _____

Check appropriate line and fill in course numbers:

1) Replaced Course Was: Required Course ____ Elective ____ Credit Hour(s) _____

Course #: _____ Title: _____

Substituting Course Info:

Course #: _____ Title: _____ Credit Hour(s) _____

2) Replaced Course Was: Required Course ____ Elective ____ Credit Hour(s) _____

Course #: _____ Title: _____

Substituting Course Info:

Course #: _____ Title: _____ Credit Hour(s) _____

3) Replaced Course Was: Required Course ____ Elective ____ Credit Hour(s) _____

Course #: _____ Title: _____

Substituting Course Info:

Course #: _____ Title: _____ Credit Hour(s) _____

COMMENTS: _____

Advisor Signature: _____

Date: _____

Program Director: _____

Date: _____

Approved/Assoc Dean

University Graduate School: _____

Date: _____

INDIANA UNIVERSITY GRADUATE SCHOOL

APPOINTMENT OF ADVISORY COMMITTEE
(Please Type)

Name of Student _____ Univ ID _____

Department _____ Birth Date _____

Major _____ Minor(s) _____

Date of Enrollment in the University Graduate School _____

ADVISORY COMMITTEE:

Name Discipline Signature

1st inside member

2nd inside member

1st outside member

Signature/Departmental Chairperson
or Graduate Advisor _____ Date _____

Approved/Associate Dean
University Graduate School _____ Date _____

Note: The student's major department shall assign every Ph.D. student admitted to a degree program to an advisory committee no later than one year after admission to the Ph.D. program.
The names of the faculty on the advisory committee shall be forwarded, also no later than one year after admission, to the Graduate School for approval.

INDIANA UNIVERSITY GRADUATE SCHOOL

REQUEST FOR CHANGE OF ADVISORY COMMITTEE MEMBERS(S)
(Please Type)

Name of Student _____

Univ ID _____

Department _____

Birth Date _____

Major _____

Minor(s) _____

Name(s) of committee member(s) to be deleted:

Reason(s) for the requested change(s):

Information pertaining to the new member(s):

NAME	SIGNATURE	DEPARTMENT	UNIV ID (required)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Signature/Departmental Chairperson _____

Date _____

Approved/Associate Dean

University Graduate School _____

Date _____

INDIANA UNIVERSITY GRADUATE SCHOOL

NOMINATION TO CANDIDACY FOR THE PHD DEGREE
(Please Type)

Name of Student _____ Univ ID _____

Department _____ Birth Date _____

Date of Enrollment in the University Graduate School _____ Date of Qualifying Exam _____

Date Candidacy Expires _____ Total Graduate Credits Earned (Including Transferred Credits)* _____

REQUIREMENT COMPLETION DATES

Major _____

Minor _____ Date _____

Minor _____ Date _____

Language Proficiency (If student is using research skill, please list courses)

_____ Date _____

_____ Date _____

This certifies that the above named student has passed the Qualifying Examination and is hereby nominated to candidacy for the PHD degree.

Advisory _____

Committee _____

Signatures _____

Outside Minor _____
(Outside Minor Examination Passed)

OR _____
(Outside Minor Examination Waived)

Chair or Graduate Advisor/Major Dept. _____ Date _____

Information Verified/PHD Recorder _____ Date _____
University Graduate School

Approved/Associate Dean _____ Date _____
University Graduate School

*Do not submit this form to the University Graduate School until the transfer of all credits from other institutions has been posted.

INDIANA UNIVERSITY GRADUATE SCHOOL
 NOMINATION OF RESEARCH COMMITTEE FOR THE PHD
 (Please Type)

Name of Student _____ Univ ID _____
 Department _____ Birth Date _____
 Major _____ Minor(s) _____
 Date of Qualifying Exam _____
 Date of Enrollment in the University Graduate School _____
 Proposed Dissertation Title _____

Dissertation Prospectus: Please attach a one-two page summary of the proposed research. If the research involves human subjects, animals, biohazards, biosafety, or radiation, please also attach an approval from the appropriate committee.

Note: Your signature below indicates that you have read the attached prospectus and agree to serve, if appointed, on a committee to supervise this research.

NAME	SIGNATURE	DEPARTMENT	UNIV ID (required)
_____ (Chair of Committee)	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____ (Minor Representative)	_____	_____	_____

All committee members must be members of the University Graduate School Faculty and at least half must have the endorsement to direct doctoral dissertations.

I certify that I have examined the attached prospectus and that this committee is appropriate to supervise research in this area.

Signature/Departmental Chairperson _____ Date _____

Approved/Associate Dean
 University Graduate School _____ Date _____

(To be used only by students who have passed the qualifying examination and who have previously been admitted to candidacy)

INDIANA UNIVERSITY GRADUATE SCHOOL

REQUEST FOR CHANGE OF RESEARCH COMMITTEE MEMBERS(S)
(Please Type)

Name of Student _____ Univ ID _____

Department _____ Birth Date _____

Major _____ Minor(s) _____

Dissertation Title _____

Name(s) of committee member(s) to be deleted:

Reason(s) for the requested change(s):

Information pertaining to the new member(s):

NAME	SIGNATURE	DEPARTMENT	UNIV ID (required)
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_____	_____	_____	_____
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_____	_____	_____	_____
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_____	_____	_____	_____
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Signature/Departmental Chairperson _____ Date _____

Approved/Associate Dean _____ Date _____
University Graduate School _____

IUPUI Graduate Office
Graduate Student
Fitness-For-Duty Medical Certification
Return to School/Work from Leave of Absence

The purpose of this form is to certify that the student is fit to return to school/work if a serious health condition required that medical leave be granted.

This section to be completed by the student:

Name of Student: _____ Univ ID# _____
Department: _____ Days Absent: _____

This section to be completed by the health care provider:

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Is student able to return to class and to perform the essential functions of student's position in their Graduate program? If "NO," when will the student be able to perform the essential functions? _____

Comments or limitations suggested:

Health Care Provider Information:

Name: _____

Signature: _____ Medical Specialty or
Type of Practice: _____

Date: _____

INDIANA UNIVERSITY GRADUATE SCHOOL

Termination of Study

Student Name _____

Univ ID _____

Major _____

Date of Termination _____

Reason for
Termination _____

Signed _____

(Chair of Research Committee
or Student's Advisor)

Signed _____

Associate Dean, University Graduate School

Submit this form to the Indiana University Graduate School at IUPUI at the time the student leaves the University.

(Basic Science Programs must submit this form to the School of Medicine, Graduate Division, MS 207)

INDIANA UNIVERSITY GRADUATE SCHOOL

Minor in PhD Program
(Please Type)

Name of Student _____ Univ ID _____
Department _____ Birth Date _____
Major _____ Minor _____
Major Advisor: _____ Minor Advisor: _____

Proposed Courses in Minor Area:

<u>Department</u>	<u>Course Number</u>	<u>Title</u>	<u>Credit Hours</u>
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_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Comments:

Approved/Minor Advisor: _____ Date: _____

Approved/Major Advisor: _____ Date: _____

Approved/Associate Dean
University Graduate School: _____ Date: _____