

## **Integrated Watershed Studies Graduate Portfolio Program Information for Program Applications**

### **Program Description**

The Integrated Watershed Studies Graduate Portfolio Program (IWSGPP) provides graduate students at The University of Texas at Austin the opportunity to supplement their current degree program with an interdisciplinary study of watershed issues.

GPP students complete requirements comprised of coursework, field experience, a research paper, and a research presentation, all focused on integrated watershed challenges. Through this additional focused study, GPP students are able to take advantage of UT-Austin's resources and learn from both the unique local landscape of Central Texas and their fellow students from other disciplines. As a result, GPP students complete the program with a broader understanding of water issues.

The University of Texas at Austin offers portfolio programs to introduce students to transdisciplinary areas of academic inquiry while completing degree requirements in an established discipline. Portfolio programs are not degree programs; instead they provide an opportunity for graduate students to orient their studies to address a specific topic that overlaps several disciplines. These programs are similar to a minor area of study or a certificate program at other institutions. Upon completion of both the degree and the portfolio requirements, the portfolio certification will be added to the student's transcript.

The Integrated Watershed Studies Graduate Portfolio Program is administered through the UT Environmental Science Institute, <http://www.esi.utexas.edu>.

### **Eligibility**

To be eligible, applicants must be currently enrolled in a masters or doctoral program and must be in good academic standing in one of the following participating academic units at UT-Austin:

- Jackson School of Geosciences
- School of Architecture
- Lyndon B. Johnson School of Public Affairs
- School of Law
- Department of Civil, Architectural, and Environmental Engineering (Cockrell School of Engineering)
- Department of Geography and the Environment (College of Liberal Arts)
- Marine Science Institute (College of Natural Sciences)
- Graduate Program in Ecology and Evolutionary Biology (College of Natural Sciences)
- Graduate Program in Plant Biology (College of Natural Sciences)

New departments can be added to the program, so if your department is not listed please contact us.

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## Program Requirements

Students in the IWSGPP must complete the following substantive requirements:

1. *Science/Engineering Requirement*: Two courses with a minimum of 50% content regarding watershed science or watershed engineering;
2. *Policy/Planning Requirement*: Two courses with a minimum of 50% content regarding watershed policy or watershed planning;
3. *Field Experience*: Participation in a field experience either as part of an organized course (in which the field experience is at least 25% of the course grade) or an experience not for course credit.
4. *Research Paper*: The paper may be part of an organized course, a report developed from field experience, a thesis or dissertation chapter, or paper of similar length and intent, and must integrate watershed issues from an interdisciplinary standpoint.
5. *Research Presentation*: Portfolio students must present their research at least once at an event. Ideally this is an event sponsored by the IWSGPP, but a regional, national, or international research conference is also acceptable.

Individual courses may satisfy more than one of the above requirements. For example, a course may simultaneously partially satisfy both requirements (1) and (2), above. In all circumstances, students must complete at least twelve hours of coursework appropriate for the Portfolio. Three of the course credits required for the program may be fulfilled through independent study.

## Portfolio Coursework

The following is a list of courses suitable for use in satisfying the portfolio requirements. Courses may be completed prior to applying to the portfolio program. Note that this list is not exhaustive, and courses not listed here may be deemed suitable for inclusion.

### Policy / Planning Courses

- Policy Research Project (PA 882D)
- Air, Water, and Toxics (LAW 341L)
- Environmental Economics (ECO 384N)
- Water Resources Planning (CRP 387C)
- Environmental Policy (PA 388K)
- Urban Hydrogeology (GEO 391)
- Sustainable Development (ARC 386M)
- Environmental Economic Policy (PA 693B)
- Water Law (LAW 376L)
- Coastal Watersheds (LAW 379M)
- Transboundary Water Resources (CE 397)
- Environmental Law (LAW 341L)
- Natural Resource Economics (ECO 384N)
- Urban Economic Development Policy (CRP 385C)
- Groundwater Management in Texas (GEO 391)
- Urban Landscape & Placemaking (ARC 386M)
- Right to the City: Environmental Justice (CRP 385C)
- Environmental Law & Policy (CRP 383)
- Environmental Readings (CRP 383)
- Urban Environmental Analysis (CRP 383)

### Science / Engineering Courses

- Watersheds Systems & Environmental Mgmt. (GRG 384C)
- Geomorphology of the Southwest (GRG 380E)
- Environmental GIS (GRG 360G)
- Internship in Hydrogeology (GEO 679J)
- Groundwater Hydrology (GEO 476K)
- Physical Hydrogeology (GEO 391C)
- Environmental Isotope Geochemistry (GEO 388H)

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- Landscape Ecology (GRG 396T)
- Advanced Remote Sensing (GRG 396T)
- Remote Sensing (GRG 396T)
- Landuse / Landcover Practicum (GRG 396T)
- Advanced GIS (GRG 470C)
- Remote Sensing of the Environment (GRG 493K)
- GIS in Water Resources (CE 394K)
- Surface Water (CE 394K)
- Groundwater Pollution and Transport (CE 394K)
- Environmental Organic Chemistry (CE 390P)
- Water Pollution Chemistry (CE 390N)
- Stream, Impoundment & Estuarine Analysis (CE 385K)
- Water Resource Planning & Management (CE 385D)
- Environmental Fluid Mechanics (CE 380S)
- Hydrology (CE 374K)
- Hydraulic Engineering Design (CE 365K)
- Physical Climatology (GEO 387H or 377P)
- Environmental Organic Geochemistry (GEO 387E)
- Digital Methods in Hydrogeology (GEO 383E)
- Geology and Hydrology (GEO 383C)
- Clastic Depositional Systems (GEO 383)
- Physical Hydrology (GEO 382S)
- Fluid Physics for Geologists (GEO 382G)
- Fractured Rock Hydrology and Mechanics (GEO 382F)
- Physical Hydrology (GEO 376S)
- Field Methods in Groundwater Hydrology (GEO 376L)
- Physical & Chemical Hydrogeology (GEO 346C)
- Hydrogeology Cooperative (GEO 329W)
- Geomicrobiology (GEO 391)
- Hydroclimatology (GEO 387H)
- Applied GIS (CRP 386)
- Coastal Watersheds (MNS 383)

#### Fieldwork Courses

- Groundwater Field Methods (GEO 382C)
- Aquifer Testing (GEO 191W)
- Coastal Watersheds (MNS 152T)

#### Admissions Procedures

A complete application to enter the GPP consists of:

1. The application form
2. A brief one-page essay describing the relationship of integrated watershed studies to your degree program, career goals, and interests
3. Proof of enrollment and good academic standing in an approved graduate degree program
4. A plan detailing how you intend to satisfy the substantive requirements of the portfolio program: (a) coursework, (b) field experience, (c) research paper related to integrated watershed studies, and (d) research presentation.

Applications to the Graduate Portfolio Program in Integrated Watershed Studies are accepted year-round. Students are encouraged to get involved early in their time as a student, but applicants may be at any point in their graduate study, including the year prior to graduation.

Application materials should be submitted either electronically to Eric Hersh (Research Coordinator) at [ehersh@esi.utexas.edu](mailto:ehersh@esi.utexas.edu) or in hard copy to the ESI office, located in EPS 3.102A (attention Eric Hersh).

#### Completion Procedures

To complete the program, the submission of a final package for evaluation and approval is required before a decision is made to grant the IWSGPP endorsement. This includes:

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1. The completion form
2. A written statement from your graduate advisor or dissertation supervisor attesting to your completion of the requirements
3. A copy of your transcript (official or unofficial)
4. Your research paper (a draft dissertation chapter is acceptable as long as the final version is provided upon completion)
5. A copy of your approved research presentation
6. A narrative description of how your coursework, fieldwork, research paper, and research presentation met the substantive program requirements and demonstrated the integration of watershed issues from an interdisciplinary standpoint.

### **Faculty Steering Committee**

The IWSGPP is overseen by a Faculty Steering Committee. While the program is administered by the Environmental Science Institute, decisions regarding program admissions, program completion, program requirements, and required curriculum are the responsibility of the Committee. The Faculty Steering Committee consists of:

- Bayani Cardenas, Jackson School of Geosciences
- Daene McKinney, Department of Civil, Architectural, and Environmental Engineering
- David Eaton, Lyndon B. Johnson School of Public Affairs
- Dean Hendrickson, Section of Integrative Biology
- Edgardo Latrubesse, Department of Geography and the Environment
- Jay Banner, Jackson School of Geosciences
- Jim McClelland, Marine Science Institute
- Melinda Taylor, School of Law
- Steven Moore, School of Architecture

### **Frequently Asked Questions**

*1. When should I submit an application for the program?*

Students are encouraged to get involved early in their time as a student. You should submit an application at least two semesters before you intend to graduate. If you plan to graduate in the spring or summer, you should submit your application before the first day of the fall semester. If you plan to graduate in the fall, you should submit your application before the first day of the spring semester. The Faculty Steering Committee reviews applications at the beginning of the fall and spring semesters each academic year. Contact us if there is an issue with the time frame.

*2. If I meet the program requirements, will my application automatically be accepted?*

Not necessarily. This is a competitive program and not all applications will be accepted due to administrative limitations and University policies. However, the Faculty Steering Committee will attempt to include all students who meet the program requirements and demonstrate a strong interest in interdisciplinary watershed issues.

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*3. Can I apply courses to the program that I have completed in previous semesters?*

Yes. You can fulfill the program's course requirements with courses you have successfully completed in previous semesters in the same degree program. However, these courses must be listed on the Approved Courses list.

*4. I'm interested in a course not currently listed – is it possible to have it approved as part of my Portfolio?*

Yes. If you find a course that has a substantial focus on watershed issues, please send the course title and description to the Program Coordinator (listed below) and request that it be considered by the Faculty Steering Committee. If you are a new applicant to the program, you can also include the course title and description in your application materials.

*5. What should my research presentation cover?*

You must present your research at least once at an event. Ideally this is an event sponsored by the IWSGPP, but a regional, national, or international research conference is also acceptable. Both are fine too! If you want to use a presentation at a conference to fulfill your requirement you will need to explain what specific aspects of your presentation are relevant to the integrated watershed studies theme. Simply going and presenting your science (even if watershed-related) doesn't fulfill the requirement. However, if the presentation also addressed policy/management implications, it could be acceptable.

*5. Are there other portfolio programs at UT?*

Yes, there are several other portfolio programs available at UT in a variety of subjects. The Graduate School maintains a list of all portfolio programs at: [www.utexas.edu/ogs/docport/index.html](http://www.utexas.edu/ogs/docport/index.html).

*6. Will my participation in the program be reflected on my diploma or transcript?*

Students who successfully complete the program requirements will have a statement added to their transcript that reads, "With Certification in the Graduate Portfolio Program in Integrated Watershed Studies." Portfolio Program certification will not appear on your diploma.

*7. If I have further questions, who can I contact?*

Contact Eric Hersh, Research Program Coordinator at ESI, at [ehersh@esi.utexas.edu](mailto:ehersh@esi.utexas.edu).