Graduate Student and Faculty Advisor

HANDBOOK

Waters of the West

Graduate Education & Research Program

University of Idaho
A LEGACY OF LEADING

Graduate Student and Faculty Advisor Handbook
Table of Contents

I. Program Overview……3

II. Curriculum Requirements
~ Water Resources Engineering & Science……4
~ Water Resources Science & Management……...6
~ Water Resources Law, Management, & Policy……8
~ Water Resources Concurrent J.D. degree……9

III. Student/Major Professor/Committee Relationships, Expectations & Suggested Protocols……..11

IV. Interdisciplinary Research……13
~ Definitions……...13
~ Strategies for Interdisciplinary Research……13
~ Further Readings in Interdisciplinarity……14

V. Materials, Equipment, and Services……15

VI. Steps to the Degree……16
~ M.S……..…..16
~ Ph.D..……...18

VII. Professional Conduct and Ethics……..20

VIII. Interdisciplinary Forms……...22
~Additional Information……24

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I. About Water Resources

Water Resources is an interdisciplinary graduate program. The term "Water Resources" is used here in the broadest sense: the study of how water moves through and interacts with natural systems, its chemical and biological components, and the physical, social, economic and legal aspects of human interaction with the water cycle.

Over 50 faculty in 13 departments in 7 colleges are currently involved in the program. The program trains students to address complex water resources issues by building disciplinary depth in concert with interdisciplinary breadth to understand focused problems and communicate across disciplines. We strive to educate scientists and engineers to be more politically aware and policymakers to be more scientifically knowledgeable. To accomplish both objectives, the program is designed to have three overlapping degree option areas in both the M.S. and Ph.D. programs:

Water Resources Engineering & Science
Water Resources Science & Management
Water Resources Law, Management & Policy

Additionally, concurrent JD/MS and JD/PhD degree options are available with any of the three option areas. Cross recognition of courses allows a JD/MS to be completed in 4 years and a JD/PhD in 6 years.

Overview of Graduate Degree Requirements

Students in the Water Resources Program must meet the general requirements set forth by the College of Graduate Studies (see Part Four) for the M.S. or Ph.D. degrees with the following exceptions. The degree of M.S. in Water Resources requires 29 credits of course work and completion of a thesis, equivalent to a minimum of 6 credits of Research and Thesis, for a total of 35 credits (note for transfers: An M.S. student must complete at least 18 of the total 35 required credits at the University of Idaho while matriculated in the College of Graduate Studies). The degree of Ph.D. in Water Resources requires a minimum of 39 credits of course work beyond the bachelor's degree and completion of a dissertation for a total of 78 credits (note for transfers: A Ph.D. student must complete at least 39 of the 78 required credits at the University of Idaho while matriculated in the College of Graduate Studies). Both M.S. and Ph.D. degrees have higher credit requirements for course work than those of the College of Graduate Studies to allow students to develop depth in a water resources subject area while accommodating breadth in the interdisciplinary areas. Students in the Water Resources concurrent J.D. track must meet the general requirements set forth by the College of Graduate Studies and Water Resources Program for the M.S. or Ph.D. degrees and the College of Law for the J.D. The following sections summarize specific requirements for the three option areas as well as for the joint M.S./ J.D. and Ph.D./ J.D.

II. Curriculum Requirements

Water Resources Engineering & Science Option Area

Entry Requirements
Coursework in the following is required for (M.S. and Ph.D.) admission to the Water Resources Engineering & Science Option Area. Provisional admission for M.S. students may be granted to those who have completed the majority of this coursework, provided the remaining coursework is completed as deficiency requirements.

Calculus (minimum of 9 credits)
Differential Equations (3 credits)
Statistics for Scientists/Engineers (3 credits)
Chemistry (minimum of 4 credits)
Physics (minimum of 4 credits)
Engineering Fluid Mechanics (minimum of 3 credits)

Common Courses
The following courses are required of both M.S. and Ph.D. students in all of the Water Resources Option Areas.

WR 501 Water Resources Seminar (1 cr.)
WR 506 Interdisciplinary Methods in Water Resources (3 cr.)
WR 507 Integrated Water Resources Projects (3 cr.)
and
one elective course outside of the option area: A 500 (or 900 in LAW) level elective in either Science & Management or Law, Management & Policy Option Areas (3 cr. for Ph.D.)

Core Courses
M.S. students are required to take 6 credits, and Ph.D. students are required to take 9 credits from the following:

BAE 552 Environmental Water Quality (3 cr.)
BAE 558 Fluid Mechanics of Porous Media (3 cr.)
SOILS 515 & SOILS 516 Environmental Biophysics (2 cr.) & Lab (1 cr.) (COOP course at WSU)
CE 421/BAE 451 Engineering Hydrology (3 cr.)
CE 526 Aquatic Habitat Modeling (3 cr.)
or
CE 535 Fluvial Geomorphology and River Mechanics (3 cr.)
HYDR 509 Quantitative Hydrogeology (3 cr.)
HYDR 576 Fundamentals of Modeling Hydrogeologic Systems (3 cr.)

Core Courses Prerequisites:
BAE 558 Fluid Mechanics of Porous Media: Math 275, Math 310, Groundwater or Soils or Fluid Mechanics
CE 421 Engineering Hydrology: BAE 355/CE325 (Fundamentals of Hydrologic Engineering)
CE 431 Design of Water and Wastewater Systems I: CE 322, CE 330, ENGR 335
CE 527 Computational Hydrology: BAE 355/CE325 (Fundamentals of Hydrologic Engineering); knowledge of a computer programming language
HYDR 509 Quantitative Hydrogeology: Math 275, Statistics 251 or 301

Electives for Engineering & Science Option Area[1]

As noted above, one elective *must* be in either the Science & Management or Law, Management & Policy Option Areas for PhD students. A core course may be considered an elective course once the core requirements are satisfied. Electives not listed below will be considered on a case-by-case basis.

BAE 552 Environmental Water Quality (3 cr.)
BSYSE 558 Groundwater Flow and Contaminant Transport (4 cr.) (at WSU)
CE 428 Open Channel Hydraulics (3 cr.)
CE 431 Design of Water and Wastewater Systems I (3 cr.)
CE 520 Fluid Dynamics (3 cr.)
CE 521 Sedimentation Engineering (3 cr.)
CE 523 Water Resources Systems (3 cr.)
CE 526 Aquatic Habitat Modeling (3 cr.)
CE 528 Stochastic Hydrology (3 cr.)
CE 532 Design of Water and Wastewater Systems II (3 cr.)
CE 535 Fluvial Geomorphology and River Mechanics (3 cr.)
FOR 515 Physical Hydrology (3 cr.)
GEOE 428 Geostatistics (3 cr.)
GEOL 410 Techniques of Groundwater Study (3 cr.)
GEOG 524 GIS & Remote Sensing Applications in Hydrology (3 cr.)
HYDR 509 Quantitative Hydrogeology (3 cr.)
HYDR 512 Environmental Hydrogeology (3 cr.)
HYDR 514 Groundwater-Surface Water Interaction (3 cr.)
HYDR 568 Aquifer Test Design and Analysis (3 cr.)
MATH 539 Theory of Ordinary Differential Equations (3 cr.)
MATH 540 Partial Differential Equations (3 cr.)
PHYS J428/J528 Numerical Methods (3 cr.)
SOILS 415 Soil and Environmental Physics (3 cr.)
STAT 507 Experimental Design (3 cr.)

[1] Course descriptions: http://water.uidaho.edu or http://www.uidaho.edu/registrar/classes/catalogs.

Water Resources Science & Management Option Area

Entry Requirements
Coursework in the following is required for (M.S. and Ph.D.) admission to the Water Resources Science & Management Option Area. Provisional admission for M.S. students may be granted to those who have completed the majority of this coursework, provided the remaining coursework is completed as deficiency requirements.

Calculus (6 credits)
Statistics (3 credits)
Chemistry or Physics or Biology/Ecology (6 credits total)

Common Courses
The following courses are required of both M.S. and Ph.D. students in all of the Water Resources Option Areas.

WR 501 Water Resources Seminar (1 cr.)
WR 506 Interdisciplinary Methods in Water Resources (3 cr.)
WR 507 Integrated Water Resources Projects (3 cr.)
and
one elective course outside of the option area: A 500 (or 900 in LAW) level elective in either Engineering & Science or Law, Management & Policy Option Areas (3 cr. for Ph.D.)

Core Courses
M.S. students are required to take 6 credits, and Ph.D. students are required to take 9 credits from the following (*denotes online course option):

Statistics

STAT 431	Statistical Analysis (3 cr.) or higher stats class
or	
ENVS 541	Sampling and Analysis of Environmental Contaminants (3 cr.)

Physical Hydrology

FOR 515	Physical Hydrology (3 cr.)
or	
BAE 450	Environmental Hydrology (3 cr.)*

Subsurface Hydrology

HYDR 509	Quantitative Hydrogeology (3 cr.)
or	
SOIL 515	Soil and Environmental Physics (3 cr.)

Aquatic Ecology

FISH 530	Stream Ecology (3 cr.)
or	
FISH 503	Advanced Limnology Workshop (3 cr.)

Water Quality/Chemistry

BAE 552	Environmental Water Quality (3 cr.)

Fluvial Geomorphology and Aquatic Habitat

CE535	Fluvial Geomorphology and River Mechanics (3 cr.)
or	
CE 526	Aquatic Habitat Modeling (3 cr.)

Electives for Science & Management Option Area[1]

As noted, one elective *must* be in either Engineering & Science or Law, Management & Policy Option Areas for PhD students. A core course may be considered an elective course once the core requirements are satisfied. Electives not listed below will be considered on a case-by-case basis.

CE 523	Water Resources Systems (3 cr.)
CE 533	Water Quality Management (3 cr.)
ENVS 509	Principles of Environmental Toxicology (3 cr.)
ENVS 546	Drinking Water and Human Health (3 cr.)
GEOG 401	Climatology (3 cr.)
GEOG 410	Applied Meteorology and Climatology
GEOG 524	Hydrologic Applications of GIS & Remote (3 cr.)
GEOL 410	Techniques of Groundwater Study (3 cr.)
FISH 415	Limnology (3 cr.)
FISH 430	Riparian Ecology (3 cr.)
FISH 515	Large River Fisheries (2 cr.)
FISH 540	*Wetland Restoration (3 cr.)
FOR 462	Watershed Science and Management (3 cr.)
FOR 516	Current Literature in the Hydrologic Effects of Forest Management (1 cr.)
HYDR J512	Environmental Hydrogeology (3 cr.)
HYDR 514	Groundwater-Surface Water Interaction (3 cr.)
HYDR 568	Aquifer Test Design and Analysis (3 cr.)
HYDR 576	Fundamentals of Modeling Hydrogeologic Systems (3 cr.)
SOIL 422	Environmental Soil Chemistry (3 cr.)
SOIL 537	Soil Biochemistry (3 cr.)
STAT 507	Experimental Design (3 cr.)
STAT 514	Nonparametric Statistics (3 cr.)
STAT 519	Multivariate Analysis (3 cr.)

Electives with prerequisites beyond those for Science & Management

BAE 458	Open Channel Hydraulics (3 cr.)
BAE 552	Environmental Water Quality (3 cr.)
BAE 550	Natural Channel Flow (3 cr.)
BAE 558	Fluid Dynamics of Porous Media (3 cr.)
CE 421/BAE451	Engineering Hydrology (3 cr.)
CE 521	Sedimentation Engineering (3 cr.)
CE 520	Fluid Dynamics (3 cr.)
CE 528	Stochastic Hydrology (3 cr.)
ENGR 428	Numerical Methods (3 cr.)

[1] Course descriptions: http://water.uidaho.edu or http://www.uidaho.edu/registrar/classes/catalogs.

Water Resources Law, Management & Policy Option Area

Entry Requirements
A background in government, public policy, or management is required for M.S. and Ph.D. admission to the Law, Management, and Policy Option Area. Students without an undergraduate degree in Political Science, Public Policy, Government, Constitutional Law, Civil Procedure, or related field may be granted provisional admission, but will be required to complete coursework (in addition to standard program and option area requirements) that demonstrates a minimum level of competency. This should include:

American Government (6 credits at the 400 level)
Public Policy (6 credits at the 400 level) **or**
Both requirements above may be met by taking equivalent law courses including:
Constitutional Law and Civil Procedure (12 credits at the 900 level, as approved by major advisor)
Subject to approval of the Water Resources Program curriculum committee, other relevant completed courses (or professional experience) may be substituted to meet these requirements.

Common Courses
The following courses are required of both M.S. and Ph.D. students in all of the Water Resources Option Areas.

WR 501 Water Resources Seminar (1 cr.)
WR 506 Interdisciplinary Methods in Water Resources (3 cr.)
WR 507 Integrated Water Resources Projects (3 cr.)
and
one elective course outside of the option area: A 500 level elective in either Engineering & Science or Science & Management Water Resources Option Areas (3 cr. for Ph.D.)

Core Courses[1]
All students in the Water Resources Law, Management & Policy Option Area are required to complete:
Research or Analytical Methods (**3 cr.** determined in consultation with committee)

The student and committee will select the appropriate mix of Law, Management and Policy courses from the following list. Law students are encouraged to take non-Law courses. Non-law students are encouraged to take courses from at least two disciplines. M.S. students are required to take 6 credits, and Ph.D. students 9 credits from the following:

AGEC 577	Law, Ethics and the Environment (3 cr.)
CSS 573	Planning & Decision Making for Watershed Management (3 cr.)
LAW 942	Water Law I (1 cr.)
LAW 946	Water and Energy Policy Seminar (2 cr.)
LAW 947	Environmental Law (3 cr.)
LAW 951	Environmental Policy (3 cr.)
POLS 554	Public Organization Theory (3 cr.)
POLS 562	Natural Resource Policy (3 cr.)
POLS 572	Local Government Politics & Administration (3 cr.)

Electives for Law, Management & Policy Option Area[1]
As noted, one elective *must* be in either Engineering & Science or Science & Management Option Areas for PhD students. A core course may be considered an elective course once the core requirements are satisfied. Electives not listed below will be considered on a case-by-case basis.

AGEC 451	Applied Environmental and Natural Resource Economics (3 cr.)
AGEC 531	Economic Analysis of Environmental Policies (3 cr.)
AGEC 532	Natural Resource Economics and Policy (3 cr.)
CSS 510	Applications of Communication Theory in Natural Resources (3 cr.)
CSS 572	Human Dimensions in Restoration Ecology (3 cr.)
CSS 580	Practicum in Restoration Ecology (2 cr.)
ENVS 546	Drinking Water and Human Health (3 cr.)
ENVS 579	Introduction to Environmental Regulation (3 cr.)
FOR 462	Watershed Science and Management (3 cr.)
FOR 585	Natural Resource Policy Analysis (2 cr.)
HIST 524	American Environmental History (3 cr.)
LAW 906	Natural Resources Law Seminar (3 cr.)
LAW 907	Administrative Law (3 cr.)
LAW 934	Land Use Law and Planning
LAW 937	Wildlife Law and Policy (3 cr.)
LAW 938	International Environmental and Water Law (3 cr.)
LAW 939	Law, Science, and the Environment (2 cr.)
LAW 948	Natural Resources Law and Policy (3 cr.)
LAW 949	Native American Law (3 cr.)
LAW 969	Water Law II (2 cr.)
LAW 979	Native American Natural Resources Law (3 cr.)
PHIL 552	Environmental Philosophy (3 cr.)

[1] Course descriptions: http://water.uidaho.edu or http://www.uidaho.edu/registrar/classes/catalogs.

Water Resources Concurrent J.D. Degree

Entry Requirements

Completion of requirements for admission to both the College of Law and the specific Water Resources option area is required. Students are required to apply separately to the College of Law and the College of Graduate Studies, Water Resources Program. Acceptance to both colleges does not have to occur simultaneously. A law student can apply for summer or fall admission to the Water Resources Program in the College of Graduate Studies during the first year of law school. Then, during the second year of law school, a student can begin graduate school. A Steering Committee consisting of the Director of the Water Resources Program, the Associate Dean for Administration and Students of the College of Law, one non-law member of the Water Resources faculty and one member of the Law faculty will make admission decisions to the concurrent degree program.

Common/Core Courses

All students seeking to earn the Water Resources concurrent J.D. degree are required to complete coursework as specified for the particular Water Resources Option Area for the M.S. or Ph.D., as well as coursework required by the Law School for a J.D.

Electives

The student and faculty committee will select courses appropriate to satisfy the requirements of the College of Graduate Studies and College of Law.

Concurrent Degree Details:
Students in the Water Resources concurrent J.D. track must meet all graduation requirements set forth by the College of Graduate Studies for the M.S. or Ph.D. degrees and the College of Law for the J.D. Each student shall have a "graduate committee." The student's graduate committee must meet the requirements of the College of Graduate Studies and must have at least one member from the faculty of the College of Law.

A total of 18 credits may be double counted for a J.D./M.S. concurrent degree, and a total of 21 credits may be double counted for a J.D./Ph.D. concurrent degree under the following guidelines:

No more than 12 credits of M.S. and Ph.D. graduate school credit are allowed toward the J.D. degree. The courses must be approved by the student's advisor in the College of Law with the following guidelines: 1) courses approved for credit toward a J.D. must be complementary to an emphasis in water law; 2) must enhance the candidate's ability to serve clients and the legal profession in the area of water law; and, 3) must not be the substantive equivalent to a course offered in the College of Law and available to the student.

No more than 6 credits from Law are allowed toward the M.S. degree in Engineering & Science and Science & Management option areas, no more than 12 credits towards the M.S. degree in Law, Management & Policy option area, and no more than 9 credits toward the Ph.D. degree from the following list:

Law 906 Natural Resources Law Seminar (3 cr)
Law 907 Administrative Law (3 cr)
Law 934 Land Use Law and Planning (3 cr)
Law 937 Wildlife Law & Policy (3 cr)
Law 938 International Environmental and Water Law (3 cr)
Law 939 Law, Science and the Environment (2 cr)
Law 942 Water Law I (1 cr)
Law 946 Water and EnergyPolicy Seminar (2 cr)
Law 947 Environmental Law (3 cr)
Law 948 Natural Resource Law and Policy (3 cr)
Law 949 Native American Law (3 cr)
Law 951 Environmental Policy (3 cr)
Law 969 Water Law II 2 cr)
Law 979 Native American Natural Resource Law (3 cr)

Satisfactory completion of both degrees is required to qualify for the exchange credit, as the degrees are granted concurrently. The first year of study for concurrent M.S. or Ph.D. students must be exclusively in the College of Law. M.S. students are required to write a thesis. Ph.D. students are required to write a dissertation. If the student fails to complete the M.S. or Ph.D. in Water Resources, only 6 credits from the Water Resources Program are allowed toward the J.D. degree. If a student fails to complete the J.D. degree, the student must satisfy all requirements for the particular option area in the Water Resources Program to receive the M.S. or Ph.D. degree.

<u>Once in the Program:</u>

Students should develop a study plan consulting with both their Law and Graduate advisors by the end of the second semester of graduate school.

Eighteen credits may be double counted toward both degrees [12 from the MS can count toward the JD, 6 from the JD can count toward the MS; this may be reversed for an MS in the Law, Policy and Management Option Area].

Students should be advised to take the full 4-5 years for both degrees. This is necessary if they want to double count the 18 credits. In addition, completion of the JD in 3 years followed by the bar exam reduces the level of integration with the graduate degree and the likelihood of timely completion of the graduate degree.

Students should be advised to take Water Law I and II in their 2L year and Water Resources 506 in the fall of their 3rd year.

Law Emphasis Areas
Students completing a JD/MS in water resources should have no difficulty also completing the requirements for a Natural Resources and Environmental Law Emphasis and are encouraged to do this.

III. Student/Major Professor/Committee Relationships, Expectations, & Suggested Protocols* The student, not the major professor, **is responsible for meeting all deadlines and academic requirements** and for initiating a process of regular communication with major professor and committee. The student is responsible for his/her own program. This includes:

- Initiating regular communication and frequent meetings with Major Professor.
- Beginning work with Major Professor on research topic immediately. To complete all requirements in a timely manner requires focus and diligence.
- Setting a timetable with short- and long-term goals, and refer to it regularly.
- A meeting of the committee as early as possible to ensure that the research includes thinking from the physical, biological, and social science areas.
- Working with Major Professor to create and present the research proposal including interdisciplinary integration of the proposed research.
- Completing the Interdisciplinary Thesis/Dissertation Approval Form after proposal presentation.
- Considering meeting with your committee each semester to keep them up-to-date on your activities. At the least, communicate with them regularly.
- Professional development activities such as attending conferences, presenting conference papers, presenting at departmental graduate student seminars, and writing papers for publication.
- Informing your committee of professional development activities that you are participating in.
- Writing sections of your thesis/dissertation as soon as possible. Delaying writing is a common problem for graduate students. The longer you wait, the harder it gets.

- Preparing drafts (proposal, thesis, etc.) in consultation with Major Professor prior to sending it to committee members. Drafts should be grammatically correct and free of typographical and spelling errors.

- Completing the Interdisciplinary Thesis/Dissertation Approval Form prior to thesis/dissertation defense.

*** Adapted from Graduate Orientation, "Surviving (and Enjoying!) Graduate School" by Margrit von Braun.**

IV. Interdisciplinary Research Requirements

"Interdisciplinary research (IDR) is a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice." From *Facilitating Interdisciplinary Research,* National Academy of Sciences (NAS), 2004.

To ensure that each thesis/dissertation is interdisciplinary, the Water Resources Program requires the following:

1. Committee Requirements

Each Committee shall be composed of members from more than one discipline. For the M.S. a minimum of three members is required; for the Ph.D. a minimum of four members is required. All committee members must approve a) the student's study plan, b) the interdisciplinary component(s) of the thesis/dissertation proposal by signing the Interdisciplinary Thesis/Dissertation Proposal Approval Form, and c) the interdisciplinary component(s) of the thesis/dissertation at the time of the final defense by signing the Interdisciplinary Thesis/Dissertation Approval Form.

2. Thesis Requirements

Each thesis/dissertation shall reflect integration beyond a single discipline. Integration can be achieved throughout the thesis/dissertation, or through a separate interdisciplinary chapter (possibly co-authored) that specifically integrates methods and/or information from at least two distinct disciplines to advance the argument(s) in the thesis/dissertation. All chapters shall be integrated into a coherent whole. Each student shall evaluate the interdisciplinarity of their thesis/dissertation, at the proposal stage by completing the Interdisciplinary Thesis/Dissertation Proposal Approval form, and prior to the final defense by completing the Interdisciplinary Thesis/Dissertation Approval Form.

Strategies for Interdisciplinary Research

Suggested ways to ensure interdisciplinary work

- From the beginning of your project, think about how the research includes aspects and implications of physical, biological and social sciences.
- Your research question and objectives should be created so that achieving the objectives requires work in at least two, preferably three, of the three areas.
- Consider and discuss with your Major Professor and committee how your research is different as a Water Resources student than in a single discipline.
- Think about devoting a chapter in the thesis/dissertation to explaining the interdisciplinary nature of the research or discussing the broader implications of the work.
- Engage in a process of planning and thought regarding how you would go about collecting and using data from at least one of the other areas. For example, why and how would social science and/or physical science data enrich a biological research project? What would you collect, given sufficient time and money, and how would you use it?

- Imagine that an agency is so impressed by your research that they decide to fund you to include the broader aspects of the problem including the other two areas. What would you do, how would you do it, and how would you use it?

- At the defense, your Major Professor and committee should ask at least one of the following questions (or another integrating question):
  - How has this research used ideas or approaches from at least two of the areas of physical, biological, and social science?
  - Could this work have been done in the same way in a single discipline?
  - What are the broader implications of your work as they apply outside of your option area?
  - If you went on to continue work on this project, how would you continue to gather data and integrate information from the three areas into your research?
  - As you apply the results of your work in the field, how would you integrate information from the three option areas?
  - If you had to explain the implications of your research to a person with a completely different background (a manager, politician, or member of the public), what would you say?
  - What is important about your research in solving environmental problems?

Further Readings in Interdisciplinarity

National Academy of Sciences. 2004. Committee on Facilitating Interdisciplinary Research, National Academy of Sciences, National Academy of Engineering, Institute of Medicine. *Facilitating Interdisciplinary Research.*
Gilbert, L.E. 1998. "Disciplinary breadth and interdisciplinary knowledge production," *Knowledge, Technology, and Policy* 11: 4-15.
Janssen, W. and P. Goldsworthy. 1996. "Multidisciplinary research for natural resource management: conceptual and practical implications," *Agricultural Systems* 51.3: 259- 279.
Klein, J.T. 1990. *Interdisciplinarity: History, Theory, and Practice.* Detroit, MI: Wayne State University.
Klein, J.T. 1996. *Crossing Boundaries: Knowledge, Disciplinarities, and Interdisciplinarities.* Charlottesville, VA: UP of Virginia.
Lattuca, L.R. 2001. *Creating Interdisciplinarity: Interdisciplinarity Research and Teaching Among College and University Faculty.* Nashville, TN: Vanderbilt UP.
Newell, W.H. 2001. "A Theory of Interdisciplinary Studies," *Issues in Integrative Studies,*19: 1-25.
Nissani, M. (1995). Fruits, salads, and smoothies: A working definition of interdisciplinarity. Journal of Educational Though. 29(2), 121-128. (http://www.is.wayne.edu/mnissani/PAGEPUG/SMOOTHIE.htm).
Repko, A.F. 2008. Interdisciplinary Research: Process and theory. Sage Publications. ISBN 978-1-4129-5915-5 (Q180.55.I48R47 2008).

V. Materials, Equipment and Services

The following is a list of policies and procedures for ordering materials, equipment and services related to the research. These are laid down by the university and the department as it pertains to graduate students. University equipment or material (including such things as tablets and paper clips) is for project use only as authorized by the project leader. University property may NEVER be used for personal use.

Travel

Discuss arrangements for travel to conferences and meetings with your major professor. Graduate students can apply for travel funding through the Graduate and Professional Student Association (GPSA). For more information, visit the GPSA website: http://www.uiweb.uidaho.edu/gpsa/.

Copying, Printing, and Library Use

Many references are available on-line. See the library web site for a Journal List (http://www.lib.uidaho.edu/). U.S. Government documents, magazines and journals in the library holding cannot be checked out. A copy of a portion of a book or an article from a journal or magazine at the library can be copied there using coins, a copy card, or a copy code (see Project Leader). Students are responsible for observing copyright rules (http://www.lib.uidaho.edu/copyright/index.html). Copies made for the project reference files will remain part of the project and cannot be removed after graduation. Please, avoid over copying! Students are advised to keep detailed record of sources of articles and books so they can be tracked at a later time.

Copy machines and printers in the Department are to be used for project copying only. Students must pay for private copying for personal or class use. Copying/printing for personal use should be done at one of the university copy centers or one of the copy shops in town. Any misuse of the copiers/printers will result in withdrawal of copying/printing privileges. All copying is under the supervision of the departmental administrative assistants so always check with them for current policies.
Graduate students may check books out of the library for an entire semester. These books should be returned in a timely manner when they are no longer actively used. This also applies to books and references borrowed from fellow students and faculty members. Books or reference material cannot be taken from an office or lab without asking permission.

Computer Usage

All students have access to computer resources. Computer accounts are requested from the University Information Technology Services (http://www.uidaho.edu/its). When using a computer, students are responsible to adhere to the computer use policy for the University of Idaho (http://www.uidaho.edu/apm/30/12).

Research Records and Notebooks

During the course of the thesis/dissertation research, a voluminous amount of data will be collected along with many notes, reminders, procedures, etc. It is very important to keep these data in an organized fashion so all records are available when writing the thesis/dissertation chapters. Research records must be zealously protected from any harm. Consider purchasing a notebook that can be dedicated solely to your research. Also, be sure to back-up your files and keep copies of all important information.

VI. Steps to the Degree

M.S. Program*

Expected date of completion_____

Activity	Suggested Completion
Appoint Major Professor	Prior to Admission
Appoint Committee	Beginning of 2nd semester
File Committee Form Appointment of Major Professor and/or Committee http://www.uidaho.edu/cogs/forms	2nd semester
Prepare Study Plan	End of 2nd semester
File Study Plan via Vandal Web	End of 2nd semester
Research proposal to Committee	2nd semester
Present research proposal	2nd semester
Complete Thesis Proposal Approval Form (File with Water Resources Office only) See page 22	2nd semester
Research	
Analyze data/summarize results	End of 3rd semester
Work with Major Professor & Committee on draft material	3rd and 4th semester
File application for degree via Vandal Web	End of 3rd semester
Thesis review by Major Professor & Committee	4th semester
Prepare final draft	4th semester
Grad school check of thesis format	End of 4th semester
File authorization for final defense Request to Proceed with Final Defense http://www.uidaho.edu/cogs/forms	End of 4th semester
Pick up defense forms from Grad school	End of 4th semester
Complete Interdisciplinary Thesis Approval Form (File with Water Resources Office only) See page 23	End of 4th semester
Final defense	End of 4th semester

Prepare final copy of thesis, complete forms, & turn into the Grad school Checklist for Final Submission of Document http://www.uidaho.edu/cogs/forms — End of 4th semester

Ph.D. Program

Expected date of completion_____

Activity	Suggested Completion
Appoint Major Professor	Prior to Admission
Appoint Committee	Beginning of 2nd semester
File Committee Form Appointment of Major Professor and/or Committee http://www.uidaho.edu/cogs/forms	2nd semester
Prepare Study Plan	3rd semester
File Study Plan via Vandal Web	End of 3rd semester
Qualifying Exam (if needed)	
Research proposal to Committee	End of 3rd semester
Present research proposal	End of 3rd semester
Complete Dissertation Proposal Approval Form (File with Water Resources Office only) See page 22	End of 3rd semester
Preliminary Examination	End of 3rd semester
File Candidacy form Report of Pre-lim Exam & Advancement to Candidacy http://www.uidaho.edu/cogs/forms	End of 3rd semester
Research	
Analyze data/summarize results	End of 4th semester
Work with Major Professor & Committee on draft material	End of 4th semester
File application for degree via Vandal Web	End of 5th semester

Dissertation review by committee	6th semester
Prepare final draft	6th semester
Grad school check of dissertation format	6th semester
File authorization for final defense Request to Proceed with Final Defense http://www.uidaho.edu/cogs/forms	6th semester
Pick up defense forms from Grad school Authorization to Submit Thesis or Dissertation http://www.uidaho.edu/cogs/forms	End of 6th semester
Complete Interdisciplinary Dissertation Approval Form (File with Water Resources Office only) See page 23	End of 6th semester
Final defense	End of 6th semester
Prepare final copy of dissertation, complete forms, & turn into the Grad school Checklist for Final Submission of Document http://www.uidaho.edu/cogs/forms UMI Doctoral Dissertation Agreement http://www.uidaho.edu/cogs/forms Survey of Earned Doctorates http://www.uidaho.edu/cogs/forms	End of 6th semester

VII. Professional Conduct and Ethics[1]

As graduate students and professional scholars-in-training, you are expected to exercise high standards of ethical and professional behavior toward your peers and your professors. Science as a whole can only make progress if individual scientists are truthful and trustworthy. As academic professionals and members of the larger community of scientists, graduate students should practice intellectual honesty at all times. You should exercise scholarly discipline and good critical skills, while engaging in civil, collegial discussion of scientific and professional matters. Ideally, scientific professionals should strive to be objective and fair in their criticism and discussion of colleagues' work. Graduate students must never engage in, permit or otherwise support professional misconduct, including plagiarism, falsification of information, or deception of any kind. Each of us is obligated to report professional misconduct to a supervisor or Program Director as appropriate.

Academic Honesty and Research Ethics

As stated above, graduate students are expected to uphold high standards of intellectual and academic honesty at all times, and to enforce university and departmental standards for academic honesty. The University Faculty and Staff Handbook states that "cheating on classroom or outside assignments, examinations or tests is a violation of [the academic honesty] code. Plagiarism, falsification of academic records, and the acquisition or use of test materials without faculty authorization are considered forms of academic dishonesty…" Should you encounter academic dishonesty, you should immediately bring it to the attention of your teaching supervisor. Other instances should be discussed with your major professor or the Program Director. There is an expectation that graduate students spend an appropriate amount of time researching and producing new papers for class research projects. If previous papers are to be expanded, you must have permission from the course instructor. A paper written for one course and turned in for a subsequent course will be considered a breach of academic honesty.

Harassment

Graduate students are expected to treat other students, peers, professors, and other colleagues in the university workplace respectfully at all times. By the same token, you are also entitled to respectful behavior on the part of your coworkers. "Harassment" in the workplace is often defined in sexual terms. However, harassment in a broader sense can also take the form of teasing, insults and other hostile or harsh speech, crude gestures, or otherwise acting toward another person in an extremely objectionable or humiliating manner, even when that behavior lacks a sexual context. Legally prohibited harassment includes not only sexual harassment but also harassment based on race, color, national origin, religion, age, disability, sexual orientation or status as a Vietnam-era veteran.

The University of Idaho Faculty and Staff Handbook Policy 3220 defines sexual harassment as "unwelcome sexual advances, requests for sexual behaviors, or other verbal or physical conduct of a sexual nature." Such conduct is deemed especially deplorable when it occurs in a relationship where there is a significant power differential, such as harassment of a student by an instructor, "…creating an intimidating, hostile, or offensive learning environment," or interfering with a student's education. Under no circumstances should a graduate student engage in behavior that might be construed as harassment, sexual or otherwise. If you feel you have been harassed or are aware of a possible violation of the University's harassment policy, you are strongly encouraged to contact the University's Office of Diversity and Human Rights, the Women's Center, your major professor, supervisor, or the Program Director.

Policy on Graduate Student Complaints

If a graduate student has a serious complaint regarding how they have been treated in class or research projects, this should be brought to the Program Director or the student graduate committee advisor. Complaints may include, but are not limited to, conflicts that involve a colleague, teaching supervisor, employer, or major professor. The student should attempt to resolve the problem by informal discussion with those involved in the grievance before a formal grievance is brought to the Program Director. The Program Director will work with the student to bring the situation to a reasonable conclusion. If necessary the student may visit the College of Graduate Studies for additional assistance.

1 This section is adapted from the UI Rangeland and Ecology Department Graduate Student Handboo

Interdisciplinary Proposal Approval Form

This form applies to the interdisciplinary components of the thesis/dissertation only.

Required Elements:

_____ The thesis/dissertation committee is composed of members from more than one discipline.

_____ All committee members approve of the interdisciplinary component(s) of the thesis/dissertation proposal, and these components are, at this stage, consistent with the interdisciplinary thesis/dissertation requirements.

Student: _____

Major Professor: _____

Committee Member: _____

Committee Member: _____

Committee Member: _____

Committee Member: _____

Interdisciplinary Thesis/Dissertation Approval Form

This form applies to the interdisciplinary components of the thesis/dissertation only.

Required Elements:

_____ The thesis/dissertation includes an interdisciplinary chapter (possibly coauthored) that specifically describes how methods and/or information from at least two distinct disciplines have been integrated in the argument(s) advanced by the thesis/dissertation, and all chapters are integrated into a coherent whole

_____ Self-evaluation of thesis/dissertation interdisciplinarity (below) submitted.

Evaluation (1 to 5 scale; attach student self-evaluation):

_____ Degree of Integration

Guiding Questions
- Are the integrated disciplines dissimilar?
- Does thesis/dissertation author draw from multiple disciplinary sources?
- Are the claims advanced associated with integrating questions?
- Does thesis/dissertation author use language that aids interdisciplinary insight?
- Does the project advance frontiers of knowledge in an area that could not be addressed within a single discipline?

_____ Creativity of Integration

Guiding Questions
- Does the integrative work involve collaboration in some form (e.g., coauthorship)?
- Does thesis/dissertation author apply a novel integrating approach?
- Does thesis/dissertation author demonstrate sensitivity to the specific characteristics of his/her problem in designing the integrating approach?

Student: _____

Major Professor: _____

Committee Member: _____

Committee Member: _____

Committee Member: _____

Committee Member: _____

Additional Information for Graduate Students

Online

Water Resources
http://www.water.uidaho.edu/

College of Graduate Studies
http://www.uidaho.edu/cogs

Admission Requirements
http://www.uidaho.edu/admissions

Financial Aid
http://www.uidaho.edu/financialaid.aspx

Schedule of Classes
http://www.uiweb.uidaho.edu/schedule/

Student Accounts/Cashier
http://www.uidaho.edu/controller/studentaccounts

Graduate and Professional Student Organization
http://www.uiweb.uidaho.edu/gpsa/