Graduate Student and Faculty Advisor Handbook

Professional Science Master's
University of Idaho

Emphasizing the Importance of Interdisciplinary
Science in Addressing Environmental and Water Issues

Graduate Student and Faculty Advisor Handbook
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I. Program Overview

Introduction

The PSM handbook includes general information and regulations concerning graduate studies at the University of Idaho, as well as information pertaining to students in this program.[1]

The University of Idaho PSM Program emphasizes an integrated approach for students committed to studying and solving environmental problems. Over 100 faculty throughout the university work across traditional disciplines to provide students with a comprehensive education in environmental mitigation and problem solving.

The Professional Science Masters

The program includes seven interdisciplinary specialty tracks that prepare students for the job market. Four professional skills courses provide training in professional aspects of applied science such as management and communication. Internships and research experiences are tailored to individual student needs. The science tracks are each focused on a different issue in environmental sciences or water resources. These include Water Resources Management, Environmental Contamination, Sustainability Science, Climate Change Science, Management of Regulated River Systems, Ecohydrological Science and Management, and Bioenergy and Bioproducts.

Registration

A graduate student is considered full-time when registered for at least 9 credits of courses and/or thesis work. All graduate students may take up to 16 credits per semester.

II. PSM Curriculum Requirements

[1] We have tried to present accurate information in this handbook that agrees with University policies. However, because policies and interpretations change over time, it is the student's responsibility to ensure

Professional Skills Course Requirements

Twelve credits of professional skills courses are required. Take one course from each of the four subgroups below. At least three of the four courses must be taken at the 500 level. If a course is offered in both 400 and 500 level formats (e.g., Phil 452/552) it must be taken at the 500 level. At least two of the courses must be PSM core courses – Bus 551, Bus 552, Eng 522, and Phil 504. JD/PSM students can use Law classes to satisfy any two of the subgroups as part of the professional skills courses requirement.

Scientific Communication
Eng 522 Communications and Science Writing for Science Professionals (spring online)

Scientific Ethics
Phil 504 PSM Environmental Ethics (fall online)
Phil 552 Environmental Philosophy (on-campus in fall)
Phil 450 Ethics & Science

Leadership & Innovation
Bus 552 Managing Scientific Innovation (every other fall)
Bus 513 Leadership and Organizational Behavior (Engineering Outreach)
Bus 495 Product Development and Brand Management (on campus)
Bus 414 Entrepreneurship

Managing Projects & Budgets
Bus 551 Managing Scientific Projects (every other fall)
Acct 482 Enterprise Accounting (on-campus, designed to fit VIEW program) or
Acct 582 Enterprise Accounting (engineering outreach)
(note: Acct 482 and 582 are both suitable to PSM students, with 482 designed for the entrepreneurship program and 582 for the engineering management program)

Track Specific Requirements

Seven scientific tracks serve as emphasis areas that allow the PSM students to tailor their education to their career goals. Fifteen credits of coursework are required within the student's specific track.

Elective Science Skills

One three-credit skills elective course is required. This course should be a complement to the student's science track, but is not track specific. Geographic Information Systems (GIS), statistics, and research methods courses are commonly used to satisfy this requirement, although other courses are possible.

Internship and Research Requirements

Three credits of internship experience are required. While the program advisor in the EnvS-WR office will help students identify internship opportunities, it is the student's responsibility to actively seek out and pursue internship opportunities. Once an internship has been set up, the program advisor in the EnvS-WR office will work with students to draw up an internship contract agreement. Assignments and a presentation summarizing the internship experience are required to receive credit for the internship.

Two credits of non-thesis research are also required. Research credits may include lab or field work, or other types of research as determined by the major professor. The student will write a research proposal for approval by the track advisor and/or major professor prior to embarking on any research activities.

PSM Curriculum Check Sheet

Name _____

Track Name_____
Advisor_____

REQUIREMENTS:
Total Credits = 35 (Professional Skills- 12 Credits; Science Track Courses- 15 Credits; Elective Science Skills- 3 Credits; Internship- 3 Credits; Research Experience - 2 Credits)

Professional Skills Courses (Required Four Courses)- 12 Credits Total
1.

2.

3.

4.

Science Track Courses- 15 Required Credits (No more than 6 credits can be taken at 400-level)
1.

2.

3.

4.

5.

Elective Science Skills (i.e. GIS, Research Methods, Statistics, etc.)- 3 Credits

1.

Internship - 3 Credits

1.

Research Experience - 2 Credits

1.

Undergraduate Deficiencies: (must be completed before PSM can be awarded)

PROFESSIONAL SCIENCE MASTERS
15 credits are required for each chosen track

LEGEND
SPR: Course offered every spring FALL: Course offered every fall
Alt.Yrs(XX): Every other year
CV: Compressed Video EO: Engineering Outreach

Advisor: Max Dakins – medakins@if.uidaho.edu

Environmental Contamination		
AltYrs	ENVS 450 Environmental Hydrology (live & www)	**3 cr.**
FALL	FS 564 Food Toxicology (www)	**3 cr.**
FALL	ENVS 428 Pollution Prevention (www)	**3 cr.**
SPR	ENVS 541 Sampling & Analysis of Environmental Contamination (www)	**3 cr.**
FALL CV	ENVS 579 Introduction to Environmental Regulations (offered in Moscow, IF, CdA)	**3 cr.**
FALL	FS 509 Environmental Toxicology (www)	**3 cr.**
FALL	GEOG 544 Environmental Impact Assessment	**4 cr.**
SPR	SOIL 438 Pesticides in the Environment	**3 cr.**

Advisor: Greg Moller – gmoller@uidaho.edu

Sustainability Science		
FALL	AGEC/ENVS 577 Law, Ethics and the Environment	**3 cr.**
FALL	ARCH 504 Social Sustainability of Global Cities	**3 cr.**
SPRING	ARCH 583 Sustainable Development	**3 cr.**
FALL	POLS 573 Sustainable Community Development Planning	**3 cr.**
SPR	REM 440 Wildland Restoration Ecology (www)	**3 cr.**
FALL	ENVS 485 Energy Efficiency and Conservation (www)	**3 cr.**
FALL	ENVS 428 Pollution Prevention (www)	**3 cr.**
FALL	GEOG 513 Global Climate Change	**3 cr.**
AltYrs	GEOG 455 Societal Resilience and Adaptation to Climate Change	**3 cr.**
SPR	GEOG 560 Population Dynamics and Distribution	**3-4 cr.**
FALL	FST 509 Environmental Toxicology (www)	**3 cr.**
FALL	FISH 540 Wetland Restoration (www)	**3 cr.**
FALL/SPR	ENVS 536 Principles of Sustainability (www)	**3 cr.**
FALL	WR 506 Interdisciplinary Methods in Water Resources (LIVE IN MOSCOW, VIDEO TO ID FALLS & BOISE)	**3 cr.**

Advisor: John Abatzoglou - jabatzoglou@uidaho.edu

Climate Change		
AltYrs	BAE 504 NW Climate Change & Water Resources	**3 cr.**
FALL	BIOP 520 Bioregional Planning Theory and Practice	**3 cr.**
FALL	FOR 462 Watershed Science and Management	**3 cr.**
AltYrs SPR	GEOG 401 Climatology	**3 cr.**
SPR	GEOG 410 Biogeography	**3 cr.**
FALL	GEOG 420 Land, Resources and the Environment	**3 cr.**
AltYrs	GEOG 455 Societal Resilience and Adaptation to Climate Change	**3 cr.**
AltYrs	CSS 510 Communications Theory in Natural Resource Management	**3 cr.**
SPRING	SOIL 504 Sustainable Management of Natural Systems	**3 cr.**
FALL	GEOG 513 Global Climate Change	**3 cr.**

Advisor: Jerry Fairley - jfairley@uidaho.edu

Water Resources Management

AltYrs	ENVS 450 Environmental Hydrology (live & www)	**3 cr.**
AltYrs	BAE 552 Environmental Water Quality (see BAE 504 for www)	**3 cr.**
FALL	CSS 573 Planning & Decision Making for Watershed Management (www)	**3 cr.**
AltYrs(12)	ENVS 546 Drinking Water and Human Health	**3 cr.**
FALL	FISH 540 Wetland Restoration (www)	**3 cr.**
FALL	FOR 462 Watershed Science and Management	**3 cr.**
FALL	GEOG 524 Hydrologic Applications of GIS and Remote Sensing	**3 cr.**
SPR	HYDR 512 Environmental Hydrogeology	**3 cr.**
FALL	WR 506 Interdisciplinary Methods in Water Resources (www)	**3 cr.**
AltYrs	CSS 510 Communications Theory in Natural Resource Management	**3 cr.**

Advisor: Daniele Tonina – dtonina@uidhao.edu

Management of Regulated River Systems		
AltYrs	FISH 515 Large River Fisheries	**2 cr.**
SPR	FISH 430 Riparian Ecology and Management	**3 cr.**
FALL	CE 421 Engineering Hydrology	**3 cr.**
EO*	CE 428 Open Channel Hydraulics	**3 cr.**
EO* SPR	CE/ME 520 Fluid Dynamics	**3 cr.**
FALL	CE 535 Fluvial Geomorphology & River Mechanics	**3 cr.**
FALL	CSS 573 Planning and Decision Making for Watershed Management (www)	**3 cr.**
AltYrs	CSS 510 Communications Theory in Natural Resource Management	**3 cr.**

***CLASSES OFFERED THROUGH ENGINEERING OUTREACH AT A HIGHER PER CREDIT RATE SEE http://eo.uidaho.edu/**

Advisor: Jan Boll – jboll@uidaho.edu

Ecohydrological Science & Management		
AltYrs	ENVS 450 Environmental Hydrology (www)	**3 cr.**
AltYrs	BAE 552 Environmental Water Quality (see BAE 504 for www)	**3 cr.**
FALL	FISH 415 Limnology	**4 cr.**
SPR	FISH 430 Riparian Ecology and Management	**3 cr.**
AltYrs	FISH 515 Large River Fisheries	**2 cr.**
FALL	FISH 540 Wetland Restoration (www)	**3 cr.**
FALL	FOR 462 Watershed Science and Management	**3 cr.**
SPR	GEOG 524 Hydrologic Applications of GIS and Remote Sensing (VIDEO)	**3 cr.**
SPR	HYDR 512 Environmental Hydrogeology	**3 cr.**
SPR	REM 440 Wildland Restoration Ecology (www)	**3 cr.**
SPR	REM 452 Western Wildland Landscapes	**1 cr.**
FALL	CSS 573 Planning and Decision Making for Watershed Management (www)	**3 cr.**
AltYrs	CSS 510 Communications Theory in Natural Resource Management	**3 cr.**

Advisor: Matt Morra – mmorra@uidaho.edu

Bioenergy and Bioproducts		
SPR	AGEC 451 Applied Natural Resource and Environmental Economics	**3 cr.**
SPR	BAE 585 Fundamentals of Bioenergy and Bioproducts	**3 cr.**
AltYrs spring	BAE 592 Biofuels	**3 cr.**
FALL	BAE 594 Thermochemical Technologies for Biomass Conversion	**3 cr.**
FALL & SPR	ENVS/FS 536 Principles of Sustainability (www)	**3 cr.**
SPR	FORP 438 Intro to Lignocellulosic Biomass Chemistry	**1 cr.**
SPR	FORP 538 Lignocellulosic Biomass Chemistry	**3 cr.**
AltYrs fall	FORP 536 Biocomposites	**3 cr.**
AltYrs spring	FOR 585 Natural Resource Policy Analysis	**2 cr.**
TBD	FS 460* Food Chemistry (co-op course w/WSU)	**3 cr.**
SPR	FS 538 Physical Properties of Food Materials	**2 cr.**
SPR	FS 570 Advanced Food Technology	**3 cr.**
SPR	PLSC 407 Field Crop Production	**3 cr.**
AltYrs spring	PLSC 546 Plant Breeding	**3 cr.**

Advisor: Jodi Johnson-Maynard – jmaynard@uidaho.edu

Sustainable Food & Fiber		
SPR	AGED 406 Exploring International Agriculture	**3 cr.**
FALL	AGED 548 Foundations of Extension Education	**2 cr.**
FALL & SPR	ENVS/FS 536 Principles of Sustainability (www)	**3 cr.**
SPR	FCS 411 Global Nutrition	**3 cr.**
TBD	FS 510* Functional Foods and Health (co-op course w/WSU)	**2 cr.**
TBD	FS 516* Food Laws (co-op course w/WSU)	**2 cr.**
FALL	FS 564 Food Toxicology (www)	**3 cr.**
SPR	GEOG 586 Transportation, GIS and Planning	**3 cr.**
SPR	PLSC 407 Field Crop Production	**3 cr.**
AltYrs spring	PLSC 546 Plant Breeding	**3 cr.**
AltYrs fall	PLSC 551 Vegetable Crop Production	**3 cr.**
SPR	SOIL 417 Market Garden Practicum	**1-16 cr.**
SPR	SOIL 438 Pesticides in the Environment	**3 cr.**
SPR	SOIL 446 Soil Fertility	**3 cr.**
	SOIL 527 Systems-based Management for Ecological Resilience	**3 cr.**

***These courses are offered cooperatively between University of Idaho and Washington State University. Refer to the following web page for a list of co-op courses: http://www.uiweb.uidaho.edu/schedule/catalog/2013/washington-state-cooperatively-offered-courses.htm**

IV. Student/Major Professor/Track Advisor Relationships,

Expectations, & Suggested Protocols*

The student, not the track advisor or major professor, **is responsible for meeting all deadlines and academic requirements** and for initiating a process of regular communication.

The student is responsible for his/her own program. This includes:

- Initiating regular communication and meetings with Track Advisor or Program Advisor.
- Meeting prerequisite deficiencies so the progress towards a degree can proceed in a timely manner.
- Starting the process of identifying an internship during the second semester. Meet with Program Advisor for details and opportunities.
- Starting the process of identifying research activities during the second semester. Meet with Track Advisor for details and opportunities.
- Proceeding in a timely manner. Set a timetable and refer to it regularly.
- Entering a study plan into Vandal Web by the end of the second semester. The study plan is a requirement to apply for graduation. Please meet with Program Advisor for instructions.
- Applying to graduate by the end of the second semester with the College of Graduate Studies. Application to graduate is found on Vandal Web.

Role of the Track Advisor

The PSM track advisors are:

- Max Dakins, Environmental Contamination
- Greg Möller, Sustainability Science
- John Abatzoglou, Climate Change
- Jerry Fairley, Water Resources Management
- Daniele Tonina, Management of Regulated River Systems
- Jan Boll, Ecohydrological Science and Management

Track Advisors assist with review of applicants, provide primary advising, track student progress using check sheets, update track course lists, and help students identify major professors.

Professional Conduct and Ethics[2]

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.

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[2] This section is adapted from the UI Rangeland and Ecology Department Graduate Student Handbook (http://www.cnr.uidaho.edu/range/StudentResources.htm).

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 Human Rights, Access and Inclusion, the Women's Center, your major professor, or the Program Director.

Policy on Graduate Student Complaints

If a graduate student has a serious complaint regarding how he/she has 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.

V. Steps to the Degree - PSM Program*

Expected date of completion_____

Activity Completion	Suggested
☐ Advising with Track Advisor	Prior to Admission
☐ Advising with Program Advisor	Beginning of semester
☐ Study Plan Submission	Before 2nd semester
☐ File Appointment of Major Professor http://www.uidaho.edu/cogs/forms	Mid 2nd semester
☐ Meet with program advisor review study plan	Early in 2nd semester
☐ Advise on research with program advisor	Mid-2nd semester
☐ Begin search for Internship	Early in 2nd semester
☐ File application for degree in Vandal Web	End of 2nd semester

*Under ideal conditions, this is a full-time 18-month program. Individual deadlines should be developed with Track Advisor and Program Advisor.

VI. Frequently Asked Questions about the PSM

Is funding available?
There is no funding due to the professional nature of this degree. You may receive financial assistance through Student Financial Aid.

When is the best time to apply?
Applications should be received by June 1 for fall admission, and by Nov. 15 for spring admission. Applications are accepted on a rolling basis. Applications will not be considered if received less than two weeks before the start of the semester.

What is the GPA requirement?
An undergraduate GPA of 3.0 is required.

Do I need to take the GREs?
The GRE is not required. However, it is strongly recommended for international students who have a low GPA.

Can the PSM be completed at a distance?
All PSM tracks contain courses that are available online or by video in certain locations. Four tracks can be completed entirely at a distance. They are Environmental Contamination, Sustainability Science, Water Resource Management, and Ecohydrological Science and Management.

Can I transfer in graduate credits from another institution or UI program?
Any graduate student can transfer in 12 credits of graduate coursework from another institution with the approval of the director of the program

Will I have deficiency courses to take if I do not have an undergraduate background in the biological, environmental, or natural resource sciences, or fields closely related to these sciences?
Most graduate level science courses do require a background in biological or physical science. These courses may include introductory biology, introductory chemistry, college algebra, or physics. If you have not taken any of these courses, you will most likely need to take one as part of your graduate course work. It will not count towards your degree, but rather build the foundation for an upper level science course. These will be discussed on a case-by-case basis with the program director.

Do I need to be full-time?
You do not need to be a full-time student (9 credits or more) to be a PSM student. You may take as one class per semester if you'd like. The program is designed for a student to be full-time for three semesters and one summer session.

Online Information for Graduate Students

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

Admission Requirements
http://www.uidaho.edu/graduateadmissions/requirements/admissionrequirements

Handbook for Writing Theses and Dissertations
http://www.uidaho.edu/cogs/currentstudents/thesis

Steps to Your Degree
http://www.uidaho.edu/cogs/currentstudents/guides/howto