

# INTERDISCIPLINARY SCIENCE AND TECHNOLOGY (P.S.M.)

## Professional Science Master. Major in Interdisciplinary Science and Technology.

The Professional Science Master (P.S.M.) degree is a partnership of the University of Idaho and regional employers, where graduates are immersed in enhanced learning and are faced with real-world learning scenarios. The P.S.M. is a national program with over 165 partner institutions participating in coordination with the National Professional Science Masters Association (NPSMA).

There are 3 requirements for the P.S.M. degree in Interdisciplinary Science and Technology:

1. 12 credits of professional skills courses,
2. 15 credits in the student's emphasis area, and
3. 3 credits of elective skills courses.

Code	Title	Hours
<b>Professional Skills Courses (12 credits)</b>		<b>12</b>
At least three of the four skills courses must be taken at the 500 level. Joint-listed courses must be taken at the graduate level. At least two of the skills courses must be designated PSM core courses, which include ENGL 522.		
Scientific Communication		
AOLL 528	Program Planning, Development, and Evaluation	
ENGL 522	Communication for Science Professionals	
FOR 546	Science Synthesis and Communication	
Scientific Ethics		
PHIL 450	Ethics in Science	
PHIL 552	Environmental Philosophy	
Leadership and Innovation		
AOLL 583	Organizational Leadership	
BUS 552		
EDAD 530	Ethical Leadership and Law in Education	
MHR 513	Leadership and Organizational Behavior	
Managing Projects and Budgets		
ACCT 582	Enterprise Accounting	
COMM 410	Conflict Management	
<b>Emphasis</b>		
Select one of the following emphasis areas:		15
Environmental Contamination (p. 1)		
Sustainable Soil and Land Systems (p. 1)		
Climate Change (p. 1)		
Water Resources (p. 1)		
Management of Regulated River Systems (p. 2)		
Ecohydrological Science and Management (p. 2)		
Precision Nutrition for Animal and Human Health (p. 2)		
Sustainable Food and Fiber (p. 2)		
Geographic Information Skills, Mapping, and Monitoring (p. 2)		
<b>Elective Science Skills (3 credits)</b>		<b>3</b>

The elective skills course should complement the student's emphasis area, but does not have to be from within that emphasis area.

Total Hours 30

### A. Environmental Contamination Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
ENVS 428	Pollution Prevention	
ENVS 450	Environmental Hydrology	
ENVS 541	Sampling and Analysis of Environmental Contaminants	
ENVS 579	Introduction to Environmental Regulations	
FOR 554	Air Quality, Pollution, and Smoke	
FS 509	Principles of Environmental Toxicology	
FS 564	Food Toxicology	
SOIL 438	Pesticides in the Environment	

### B. Sustainable Soil and Land Systems Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
AGEC/ENVS 577	Law, Ethics, and the Environment	
ENVS 428	Pollution Prevention	
ENVS 485	Energy Efficiency and Conservation	
ENVS 536	Principles of Sustainability	
FISH 540	Wetland Restoration	
FS 509	Principles of Environmental Toxicology	
GEOG 455	Societal Resilience and Adaptation to Climate Change	
GEOG 513	Global Climate Change	
REM 440	Restoration Ecology	
WR 506	Interdisciplinary Methods in Water Resources	

### C. Climate Change Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
BE 553	Northwest Climate and Water Resources Change	
BIOP 520	Introduction to Bioregional Planning	
FOR 462	Watershed Science and Management	
GEOG 401	Climatology	
GEOG 410	Biogeography	
GEOG 420	Land, Resources, and Environment	
GEOG 455	Societal Resilience and Adaptation to Climate Change	
GEOG 513	Global Climate Change	
NRS 510		

### D. Water Resources Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
BE 552		
ENVS 450	Environmental Hydrology	
FISH 540	Wetland Restoration	
FOR 462	Watershed Science and Management	

GEOG 524	Hydrologic Applications of GIS and Remote Sensing	
HYDR 512	Environmental Hydrogeology	
NRS 510		
NRS 573		
WR 506	Interdisciplinary Methods in Water Resources	

### E. Management of Regulated River Systems Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
CE 421	Engineering Hydrology	
CE 428	Open Channel Hydraulics	
CE/ME 520	Fluid Dynamics	
CE 535	Fluvial Geomorphology and River Mechanics	
FISH 430	Riparian Ecology and Management	
FISH 515	Large River Fisheries	
NRS 510		
NRS 573		

### F. Ecohydrological Science and Management Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
BE 552		
ENVS 450	Environmental Hydrology	
FISH 415	Limnology	
FISH 430	Riparian Ecology and Management	
FISH 515	Large River Fisheries	
FISH 540	Wetland Restoration	
FOR 462	Watershed Science and Management	
GEOG 524	Hydrologic Applications of GIS and Remote Sensing	
HYDR 512	Environmental Hydrogeology	
NRS 510		
NRS 573		
REM 440	Restoration Ecology	

### G. Precision Nutrition for Animal and Human Health Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
AGEC 451	Applied Environmental and Natural Resource Economics	
BE 585	Fundamentals of Bioenergy and Bioproducts	
BE 592	Biofuels	
BE 594	Thermochemical Technologies for Biomass Conversion	
ENVS/FS 536	Principles of Sustainability	
FS 538	Introduction to Physical Properties of Food	
FS 570	Advanced Food Technology	
FSP 438/538	Lignocellulosic Biomass Chemistry	
FSP 536	Biocomposites	
PLSC 407	Field Crop Production	
PLSC 546	Plant Breeding	

### H. Sustainable Food and Fiber Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
AGED 406	Exploring International Agriculture	
AGED 548	Foundations of Extension Education	
ENVS/FS 536	Principles of Sustainability	
FS 510	Functional Foods and Health	
FS 516	Food Laws	
FS 564	Food Toxicology	
PLSC 407	Field Crop Production	
PLSC 546	Plant Breeding	
PLSC 551	Vegetable Crops	
SOIL 417	Market Garden Practicum	
SOIL 438	Pesticides in the Environment	
SOIL 446	Soil Fertility	
SOIL 527	Sustainable Food Systems	

### I. Geographic Information, Skills, Mapping, and Monitoring Emphasis

Code	Title	Hours
Select 15 credits from the following electives:		
ECE 516	Image Sensors and Systems	
FOR 554	Air Quality, Pollution, and Smoke	
GEOG 524	Hydrologic Applications of GIS and Remote Sensing	
REM 507	Landscape and Habitat Dynamics	
REM 510	GIS Application in Fire Ecology and Management	
STAT 419	Introduction to SAS/R Programming	
STAT 555	Statistical Ecology	

**Courses to total 30 credits for this degree**