

## Accelerated Master of Forestry Program

### School of Forest Resources and Environmental Science

**A 4+1 program for Michigan Tech students  
with enhanced training in Natural Resources Policy.**

Contacts:

Tara L. Bal, Master of Forestry Program Coordinator

#### Summary of Class Requirements:

<b>Required classes</b>	FW5810 – Research methods in natural resources. Fall and Spring.	<b>2 credits</b>	<b>Subtotal 14 credits</b>
	FW5800 – Master’s graduate seminar. Fall and Spring.	<b>1 credit</b>	
	FW5377 - Advanced Forest & Environmental Resource Management II. Fall and Spring.	<b>2 credits</b>	
	MA5701 - Statistical Methods. (or alternate from list) Fall.	<b>3 credits</b>	
	Credits applied to both BS and MF degree	<b>6 credits</b>	
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<b>Directed electives</b>	Four classes in policy or law covering natural resources or environmental topics.	<b>9-12 credits</b>	<b>Subtotal 14-18 credits</b>
	One class in communications, rhetoric, writing, or social surveying.	<b>2-4 credits</b>	
	One class in forest biology or advanced GIS.	<b>2-4 credits</b>	
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<b>Free electives</b>		<b>0-3 credits</b>	<b>Subtotal 0-3 credits</b>
		<b>Grand total</b>	<b>30-32 credits</b>

### Directed Electives

**Four classes in policy or law covering natural resources or environmental topics from the list below (9-12 credits)**

Fall	Spring
SS 3630 Environmental Policy and Politics (3 credits)	SS 3800 Energy Technology and Policy (3 credits)
FW3760 - Human Dimensions of Natural Resources (3 credits)	SS 5313 - Sustainability Science, Policy, and Assessment (3 credits, on demand)*
SS 5003- Survey Methods (3 credits, fall and spring)	SS 5XXX Water Policy, History, and Governance
FW 5180 – Conservation Ethics (2 credits, alternate years beginning 2013-2014)*	SS 5320 - Special Topics in Environmental Policy (3-9 credits, on demand)*
SS 5301 The Policy Process (3 credits)	SS 5302 Governance and Decision Making
SS 5300 - Environmental & Energy Policy (3 credits)*	SS 5350 - Environmental Policy Analysis (3 credits)* Prereq: SS 5300, EC 2001
SS 5318 - Public Sector Management (3 credits, on demand)	SS 5635 – International Environmental Policy (3 credits, alternate years beginning 2011-2012)*
SS 5400 - Sociology and the Environment (3 credits)*	SS 5550 – Global Environmental History (3 credits, fall and spring, alternate years beginning 2014-2015)*
SS 5500 - Global Environmental History (3 credits)	SS 5900 – Heritage Management (3 credits)*
SS 6100 - Advanced Seminar in Energy and Climate Policy (3 credits, alternate years beginning 2012-2013)*	SS 5150 – Natural Hazards and Human Impacts (3 credits, Summer only)

\*must be enrolled as a graduate student

**One class in communications, rhetoric, writing, or surveying. (2-4 credits.) Suggested classes are listed below but others may be substituted with Coordinator's approval.**

Fall	Spring
SS 5003- Survey Methods (3 credits, fall and spring)	ED or FW 4850 – Environmental Education Methods (4 credits, on demand)
HU 3621 – Introduction to Journalism (3 credits, Prereq: UN 1015)	HU 4693 - Science Writing ( 3 credits, Prereq: UN 1015)
HU 3700 – Philosophy of Science (3 credits)	Obtain Advisor approval for other communication, rhetoric, or composition graduate level courses.
ED 3510 - Communicating Science I (2 credits, fall, spring, summer)	HU 4625 – Risk Communication (3 credits, spring, summer)
HU 3890 – Documentary (3 credits)	HU 5010 – Organizational Communication (3 credits, on demand)
HU 5011 – Technology, Culture, and Communication (3 credits, on demand)	

**One class in forest biology or advanced GIS. 2-4 credits.**

Fall	Spring
FW 5368 - Forest Ecophysiology Offered alternate years beginning with the 2012-2013 academic year (2 credits)	FW 5130 - Forest Vegetation Dynamics Offered alternate years beginning with the 2012-2013 academic year (3 credits)
FW 5340 - Population Genetics and Applied Forest Genetics (3 credits)	FW 5135 - Plant Community Ecology Offered alternate years beginning with the 2013-2014 academic year (3 credits)
FW5550 - GIS for Resource Management (4 credits)	FW 5115 - Restoration Ecology Offered alternate years beginning with the 2013-2014 academic year (3 credits)
FW4540 - Remote Sensing of the Environment (3 credits - alternate Fall semesters)	FW 5100 – Advanced Terrestrial Ecology) (3 credits)
FW5540 - Advanced Terrestrial Remote Sensing (4 credits, alternate Fall semesters)	FW5560 - Digital Image Processing: A Remote Sensing Perspective (3 credits, Spring) Pre-requisite: FW5550
	FW4545 - Map Design with GIS (3 credits, alternate Spring) Pre-requisite: FW3540 or FW5550
	FW5555 Advanced GIS concepts and Analysis (3 credits)
	FW5556 GIS Project management (3 credits)

**Sample Curriculum after completion of undergraduate degree (assumes no credits taken under senior rule)**

6 credits counted towards both degrees (3000 level or higher).

Fall	Spring
MA5701 - Statistical Methods (3 credits)	SS 5350 - Environmental Policy Analysis (3 credits)* Prereq: SS 5300, EC 2001
FW5810 - Research methods in natural resources (2 credits)	SS 5003 – Survey Methods (3 credits)
FW 5800 - Master's Graduate Seminar (1 credit)	FW 5377 - Advanced Forest & Environmental Resource Management II. (2 credits).
FW3760 - Human Dimensions of Natural Resources (3 credits)	FW5556 GIS Project management (3 credits)
SS 5300 - Environmental & Energy Policy (3 credits)*	
Total 12 credits	Total 12 credits

\*must be enrolled as a graduate student

**Sample 5-year curriculum (Class number, name and number of credits)**

<b>Year 1</b>	<b>Fall</b>	<b>Spring</b>
	UN1001 Perspectives on inquiry (3) FW2051 Field Techniques (1) FW2010 Vegetation of North America (4) MA1135 Calculus for Life Sciences (4) HASS Distribution (3)	UN1002 World Cultures (4) BL2160 Botany (4) CH1150 University Chemistry I (3) CH1151 University Chemistry Lab I (1) FW1050 Natural Resources Seminar (1) Free Elective (3)
	Total 15 credits	Total 16 credits
<b>Year 2</b>	<b>Fall</b>	<b>Spring</b>
	UN2001 Composition (3) MA2720 Statistical Methods (4) FW3020 Forest Ecology (3) FW3330 Soil Science (4) HASS Distribution (3)	UN2002 Institutions (3) FW1035 Wood anatomy (4) FW3200 Biometrics and Data Analysis (4) FW3540 Intro to GIS (4)
	Total 17 credits	Total 15 credits
<b>Year 3</b>	<b>Fall</b>	<b>Spring</b>
	FALL CAMP FW3010 Practice of Silviculture (4) FW3840 Forest Health (3) FW3600 Wildlife Habitat (3) FW3170 Land Measurements/GPS (1) FW3190 Multi-resource Assessment (3) FW3150 Timber Harvesting (2)	FW4080 Forest Economics and Finance (3) Directed Elective (3) FW3110 Natural Resource Policy (3) FW4140 Vegetation Modeling (2) Directed Elective (3) HASS Distribution (3)
	Total 16 credits	Total 17 credits
<b>Year 4</b>	<b>Fall</b>	<b>Spring</b>
	FW4810 Integrated Resource Assessment (4) HASS Distribution (3) FW4150 Forest Resource Management (3) Free Elective (6)	Free Elective (13) EC3400 Economic Decision Analysis (3) OR BUS2200 Business Law (3) OR PUS2300 Quantitative Problem Solving (3) OR OSM 3200 Project Management (3)
	Total 16 credits	Total 16 credits
<b>Year 5</b>	<b>Fall</b>	<b>Spring</b>
	MA5701 Statistical Methods (3) FW5810 Research Methods in Natural Resources (2) FW3760 - Human Dimensions of Natural Resources (3) SS 5300 - Environmental & Energy Policy (3) FW5800 Master's Graduate Seminar (1)	SS 5350 - Environmental Policy Analysis (3) SS 5003 – Survey methods (3)  FW 5377 - Advanced Forest & Environmental Resource Management II. (2) FW5556 GIS Project management (3)
	Total 12 credits	Total 12 credits

**Grand Total: 152 Credits**

Directed electives for undergraduates are selected from FW3320 Forest Genetics and Genomics (3 cr.), FW4120 Tree Physiology (3 cr.), FW4220 Wetlands (4 cr.), FW4370 Forest and Landscape Hydrology (3 cr.)