



NMC Freshwater Studies--Associate in Science & Arts  
 WMU Freshwater Science & Sustainability--Bachelor of Science  
**NMC Suggested Course Sequence Guide & WMU Program Requirements**



YEAR 1 - FALL SEMESTER			Credits	Contacts	Comments
WSI	105	Introduction to Freshwater Studies	3	3	
ENG	111	English Composition	4	4	
MTH	121	College Algebra	4	4	
ENV	140	Watershed Science	4	5	
<b>Total</b>			<b>15</b>	<b>16</b>	
YEAR 1 - SPRING SEMESTER			Credits	Contacts	Comments
ENG	112	English Composition	4	4	
ENV	131	Oceanography	4	5	
GEO	115	Introduction to GIS <sup>1</sup>	3	4	
PHL	105	Critical Thinking <sup>2</sup>	3	3	
<b>Total</b>			<b>14</b>	<b>16</b>	
YEAR 2 - FALL SEMESTER			Credits	Contacts	Comments
ENV	117	Meteorology & Climatology	4	5	
BIO	115	Cell, Plant and Ecosystem Biology w/lab	4	6	
CHM	150	General Chemistry I w/lab	4	5	
WSI	230	Water Policy and Sustainability <sup>3</sup>	3	3	
<b>Total</b>			<b>15</b>	<b>19</b>	
YEAR 2 - SPRING SEMESTER			Credits	Contacts	Comments
BIO	116	Genetic, Evolution, Animal Biology w/ lab	4	6	
ANT	113	Introduction to Cultural Anthropology <sup>1</sup>	3	3	
MTH	131	Introduction to Probability and Statistics	3	3	
ECO	202	Principles of Microeconomics <sup>1</sup>	3	3	
<b>Total</b>			<b>13</b>	<b>15</b>	
YEAR 2 - SUMMER SEMESTER			Credits	Contacts	Comments
WSI	290	Internship	3	3	
		Group I Humanities <sup>2</sup> (other than PHL)	3	3	
<b>Total</b>			<b>6</b>	<b>6</b>	
<b>TOTAL CREDITS at NMC:</b>			<b>63</b>		

**Note: Completion of two years of high school language with a B- or better in the last semester OR two semesters of college level World Languages OR placing into the 2000 or higher level on a proctored language proficiency exam at WMU**

**General Distribution Requirements to satisfy the Michigan Transfer Agreement (MTA), FWS and WMU:**

<sup>1</sup> Group 1 Social Science--two courses from at least 2 departments totaling 6 credits; WMU students must have ANT 113

<sup>2</sup> Group 1 Humanities--two courses from at least 2 departments totaling 6 credits

<sup>3</sup> WMU students may transfer back or substitute these credits

<sup>4</sup> Baccalaureate-level Writing Requirement at WMU



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**Transfer students should contact the local WMU office (231-995-1846) to discuss specific course schedule options.**

<b>BACCALAUREATE-LEVEL WRITING REQUIREMENT</b>			<b>Credits</b>	<b>NMC EQUIVALENT</b>
ENVS	3200	Major Environmental Writings	3	
<b>INTRODUCTORY COURSES 32 cr</b>			<b>Credits</b>	
ANTH	1200	Peoples Of the World	3	ANT 113
ECON	2110 or 2020	Principles of Microeconomics or Principles of Macroeconomics	3	ECO 201 or ECO 202
MATH	1110	Algebra II	4	
STAT	3660	Introduction to Statistics	4	MTH 131
GEOG	2250	Introduction to Meteorology and Climatology	4	ENV 117
GEOS	3220	Ocean Systems	3	ENV 131
BIOS	1610	Molecular and Cellular Biology	3	BIO 115
BIOS	1620	Ecology and Evolution	4	BIO 116
CHEM	1100	General Chemistry I	3	CHM 150
CHEM	1110	General Chemistry Lab	1	CHM 150
<b>SUSTAINABILITY CORE 34 cr</b>			<b>Credits</b>	
ANTH	3470	Ethnicity/Multiculturalism	3	
PHIL	3160	Ethics in Engineering and Technology	3	
ECON	3190	Environmental Economics	3	
ACTY	3990	Sustainable Accounting	3	
MGMT	3120	Sustainable Operations	3	
MKTG	3330	Sustainable Marketing	3	
ENVS	2150	Environmental Systems and Cycles	3	
ENVS	2250	Environmental Ecology	3	
ENVS	3000	Introduction to Sustainability	3	
ENVS	3400	Environmental Policy	4	
GEOG	3500	Conservation and Environmental Management	3	
<b>FRESHWATER CORE 10 cr</b>			<b>Credits</b>	
BIOS	5535	Freshwater Ecology	4	
BIOS or GEOG	5545 or 5530	Human Impact on Great Lakes Ecosystem or Water Resources Management	3	
ENVS	5400	Freshwater Policy	3	
<b>ELECTIVE COURSES 12 cr</b>			<b>Credits</b>	
BIOS	4990	Independent Research in Biological Sciences	1-4	
BIOS	5440	Global Change Ecology	3	
BIOS	5525	Fish Ecology	3	
BIOS	5970	Topics in Biological Sciences	3-4	
BIOS	5970	Toxicology	3	
GEOG	4120	Professional Practice	1-3	
GEOG	5550	Contemporary Issues in Resources Management	3	
GEOG	5570	Environmental Impact Assessment	3	
GEOG	5630	Surveying Techniques	4	
GEOS	5090	Surface Water Hydrology	3	
GEOS	5120	Principles of Hydrogeology	3	
GEOS	5230	Hazardous Waste Operation & Emergency Response	1	
GEOS	5240	Remediation Design and Implementation	1	
GEOS	5270	Principles of Well Drilling and Installation	1	
GEOS	5280	Prin. & Practices of Groundwater Sampling/Monitoring	1	
GEOS	5500	Environmental Field Geochemistry	3	