CONSERVATION BIOLOGY AREA OF SPECIALIZATION
Effective Fall 2017
[Prerequisites are listed in brackets]

**Group 1: Communications**
*Take one or more of the following:*
- ____ AFEE 2421 Professional Communication for Agriculture, Food, and the Environment; (3), Fall/Spring
- ____ COMM 1101 Introduction to Public Speaking; (3), (CIV), Fall/Spring
- ____ WRIT 3562W Technical and Professional Writing; (4) [WRIT 1301, or WRIT 1401, or instructor consent], Jr/Sr, Fall/Spring

**Group 2: Policy, Human Behavior, & Planning**
*Select one of the following:*
- ____ ESPM 3202W Envt. Conflict Mgmt, Leadership, and Planning; (3) (Jr/Sr), Spring
- ____ ESPM 3245 Sustainable Land Use Planning and Policy; (3), (ENV), Fall
- ____ FNRM 3101 Park and Protected Area Tourism; (3), Fall: odd year

*Select two of the following*
- ____ ESPM 3011W Ethics & Leadership in Resource Mgmt; (3), (CIV) Fall/Spring
- ____ ESPM 3241W Natural Resource & Env. Policy; (3), (SOC, CIV), Spring
- ____ ESPM 3271 Environmental Policy, Law & Human Behavior; (3), (SOC, CIV), Fall
- ____ FW 3925 Human Dimensions of Fisheries and Wildlife Management; (3), Spring
- ____ ESPM 3261 Economics and Natural Resources Management; (4), (SOC, ENV)
  *Or* APEC 3611W Environmental and Natural Resource Economics; (3), (ENV), Spring
- ____ GCC 3010 Grand Challenge: The Global Climate Challenge: Creating an Empowered Movement for Change; (3), (CIV), Spring
  *Or* GCC 5010 Grand Challenge: The Global Climate Challenge: Creating an Empowered Movement for Change; (3), (CIV), Spring

**Group 3: Organismal Biology**
*Select one of the following:*
- ____ EEB 4129 or EEB 4839 Mammalogy; (4), [BIOL 2012], Fall
- ____ EEB 4134 or EEB 4844 Ornithology; (4) [BIOL 2012], Spring
- ____ FNRM 1101 Dendrology; Identifying Forest Trees and Shrubs; (3), Fall
- ____ FW 4101 Herpetology; (4) [BIOL 1001 or 2012], Spring: odd years
- ____ FW 2003 Introduction to Marine Biology; (3) [BIOL 1001, or BIOL 1009, or instructor consent], Spring
- ____ FW 4136 Ichthyology; (4) [BIOL 2012], Fall
- ____ FW 4401 Fish Physiology and Behavior; (3) [FW 4136, BIOL 2012, CHEM 1061 (3)], Fall: even years
- ____ ENT 5021 Insect Biodiversity and Evaluation; (4), Fall
- ____ ENT 5361 Aquatic Insects; Instructor Consent; (4), Spring
- ____ PMB 4321 Minnesota Flora; (3) [BIOL 1001 or 1009], Fall: even years
- ____ PMB 4511 Flowering Plant Diversity; (3) [BIOL 1001 or 1009], Spring: odd years
Group 4: Ecosystem Ecology
Select one of the following

___ FNRM 3204 Landscape Ecology and Management; (3) [ecology course], Fall
___ FNRM 3104 Forest Ecology; (4) [basic biology course], Fall
___ FNRM 3203 Forest Fire and Disturbance Ecology; (3), Spring
___ ESPM 3575 Wetlands; (3), Spring
___ EEB 5601 Limnology; (3) Fall
___ EEB 4609W Ecosystem Ecology; (3), [EEB 3407], Fall
___ FW 5603W Habitats and Regulation of Wildlife; (3), Fall
___ GCC 5008 Grand Challenge: Policy and Science of Global Environmental Change; (3), Spring

Group 5: Conservation Biology; all courses are required

___ BIOL 2022 General Botany; (3), Fall/Spring
___ FNRM 3131 Geographical Information Systems for Natural Resources; (4), Fall/Spring
___ FW 4102 Principles of Conservation Biology; (3) [BIOL 1001 or BIOL 1009], (ENV), Spring
___ FW 5051 Analysis of Populations; (4) [statistics course, ecology course], Sr or grad student, Spring
   Or FW 5601 Fisheries Population Analysis; (3), Fall

Group 6: Management and Restoration
Select one course from the following:

___ ESPM 3101 Conservation of Plant Biodiversity; (3), Fall
___ ESPM 3251 Natural Resources in Sustainable International Development; (3), (GP), Fall
___ ESPM 4601 Environmental Pollution; (3) [SOIL 2125, CHEM 1061 and 1062 or equiv or instructor consent], Fall
___ ESPM 5071 Ecological Restoration; (4) [ecology course, and plant science or botany], Fall
___ FNRM 3411 Managing Forest Ecosystems: Silviculture; (3), Fall
___ FW 4103 Principles of Wildlife Management; (3), [BIOL 1001 or 1009], Fall
___ FW 4107 Principles of Fisheries Science and Management; (3), Spring
___ EEB 3603 Science, Protection, and Management of Aquatic, Environments; (3), Spring

Group 7: Additional Course
Must select one:
___ Students must select at least one additional course from Organismal Biology, Ecosystem Ecology, or Management and Restoration.