

INTEGRATIVE CONSERVATION (BS IN INTERDISCIPLINARY STUDIES)

The Institute for Integrative Conservation

A changing and complex global context and the narrow focus of many previous conservation efforts means that we need to take integrative approaches that balance the conservation and preservation of wildlife and their ecosystems with human wellbeing and in co-design with local communities. By wellbeing we refer to the health, social, environmental, and economic opportunities of peoples who are directly and indirectly connected to conservation action. Our approach to co-design with communities helps to preserve human cultural diversity while also addressing the needs of local peoples and helps to incorporate their ways of knowing and learning into the conception, design, and implementation of conservation projects.

The major and minor in integrative conservation provides students with the interdisciplinary training they need to engage a diversity of perspectives and solutions when addressing complex global conservation challenges. In the major, the application of this knowledge is reinforced by requiring students to complete coursework in innovation and entrepreneurship and a capstone project with an external conservation partner. These collaborative projects are coordinated and organized by the Institute for Integrative Conservation (IIC). Students will apply for and be matched to these opportunities by the IIC. This major and minor is designed for students who would like to explore career opportunities related to biodiversity conservation and the maintenance of social-ecological systems in the face of global environmental threats.

Required Credits: 37

Code	Title	Hours
Introduction to Integrative Conservation		
CONS 201	Introduction to Integrative Conservation	3
Methods in Integrative Conservation		
Students must complete three credits from Category 1 (Geospatial Methods) and a further three credits from another Category of methods courses. The Geospatial course meets the major computing requirement.		6
Category 1: Geospatial Methods:		
CONS 210	Introduction to Conservation GIS	
or other approved course		
Category 2: Quantitative Methods:		
CONS 301	Quantitative Methods in Conservation	
or other approved course		
Category 3: Qualitative and Mixed Methods:		
ANTH 445	Issues in Anthropology	
GOVT 301	Research Methods	
or other approved course		
Biodiversity:		
Select one of the following:		3
BIOL 318	Conservation Biology	
BIOL 461	Marine Ecology and Conservation	

CONS 440	Advanced Topics in Conservation (with topic Disease Ecology)	
CONS 460	Conservation Behavior	
CONS 461	Biodiversity Conservation	
or other approved course		
Communities, Voices, and Conservation:		
Select one of the following:		3
CONS 370	Environmental Justice	
CONS 401	Conservation Ethics	
CONS 410	Indigenous Knowledges & Conservation	
or other approved course		
Human Wellbeing and Nature		
Select one of the following:		3
CONS 371	Political Ecology of Conservation	
CONS 372	Sustainable Livelihoods	
CONS 440	Advanced Topics in Conservation (with topics Economics of Conservation, One Health or Sustainable Food Systems)	
or other approved course		
Applied Integrative Conservation		
		3
CONS 415	People-Centered Conservation & Climate Solutions	
CONS 421	Introduction to Conservation Planning	
CONS 440	Advanced Topics in Conservation (with topic Design Science Research for Conservation)	
or other approved course		
Capstone Integrative Conservation Project		
Select four credits from the following: ¹		4
CONS 490	Conservation Practicum	
CONS 491	International Conservation Practicum	
CONS 492	Capstone Conservation Practicum	
CONS 495	Honors	
CONS 496	Honors	
Or other approved research or independent study course on an applied conservation topic that is in collaboration with an external conservation partner organization.		
Electives		
Select the remaining 12 credits to be taken from any of the 300 or 400-level courses listed above, any other CONS prefix course, and/or a relevant selection from the courses listed below that are offered by other departments and programs. We prefer students to take as many CONS prefix courses as possible. Choice of electives should be discussed with an academic advisor from the IIC/IIC, and we encourage students to use their elective courses to develop a specialization or focus within areas of integrative conservation. For example, the choice of electives could be a short series of GIS or data science courses, a series of ecology-focused courses, a series of environmental economics or business-related courses, or a series of courses that help students deepen their understanding of how people and communities connect with nature. ²		12
ANTH 250	Introduction to Native Studies	
ANTH 324	Native People of the American Southwest	
ANTH 325	Native People of the Great Plains	
ANTH 338	Native Cultures of South America	
ANTH 351	People, Cultures, and the Environment of Polynesia	

ARTH 430	Seminar Topics in Art History
CONS 440	Advanced Topics in Conservation
BIOL 311	Ecology
BIOL 410	Animal Behavior
BIOL 411	Ecology Lab
BIOL 413	Plant Diversity and Identification
BIOL 413L	Plant Diversity and Identification Laboratory
BIOL 416	Intro to Ornithology
BIOL 417	Population and Community Ecology
BIOL 426	Aquatic Ecology
BIOL 445	GIS for Biologists
BIOL 458	Conservation Biology Laboratory
BUAD 340	Introduction to Innovation and Entrepreneurship
BUAD 451	Customer Insights for Innovation
BUAD 453	Sustainability Inspired Innovation and Design
DATA 301	Applied Machine Learning
DATA 305	Designing AI Agents
ECON 322	Environmental and Natural Resource Economics
GIS 405	Geovisualization & Cartographic Design
GIS 410	Introduction to Remotely Sensed Imagery and Analysis
GIS 420	Advanced GIS Analysis & Programming
GOVT 322	Global Environmental Politics
HIST 226	American West, 1890-
HIST 238	Native American History since 1763
MSCI 250	People, Society, and the Coast
MSCI 340	Marine Biology
MSCI 401F	
PHIL 308	Issues in Environmental Ethics
SOCI 303	Quant Research Methods
SOCI 442	Political Ecology of Health & Disease
or other approved course	
Total Hours	

37

Course	Title	Hours
First Year		
CONS 201	Introduction to Integrative Conservation	3
BIOL 204 & 204L	Introduction to Organisms, Ecology, Evolution and Introduction to Organisms, Ecology, Evolution Laboratory (important pre-req)	4
Methods in Conservation course		3
Hours		10
Second Year		
Communities, Voices, and Conservation course		3
Methods in Conservation course		3
Human Wellbeing and Nature course		3
ECON 101	Principles: Microeconomics (optional prereq)	3
Research course possible		1-3
Hours		13-15
Third Year		
Biodiversity course		3
Elective courses		6
Research course possible		1-6
Hours		10-15
Fourth Year		
Elective courses		6
Research course or Honors possible		1-6
Hours		7-12
Total Hours		40-52

¹ As part of these research courses, students attend a weekly 1-hour meeting where they develop their conservation leadership skills in areas such as: communications, conflict resolution, diplomacy, fundraising, stakeholder engagement, team building, how to run a meeting, how to construct and manage a team and a budget, theories of change. These courses will meet the major writing requirement.

² Choice of electives should be discussed with an academic advisor from the IIC and we encourage students to use their elective courses to develop a specialization or focus within areas of integrative conservation.

Recommended Sequence of Courses

Recommended sequence for students. Note that prereqs could be met with transfer (or equivalent) credit earned outside of W&M and that prereq recommendations vary according to which advanced and elective courses students intend to enroll in. Please talk to the Faculty Director of the Institute for Integrative Conservation if you would like to transfer courses from a study abroad program to be considered as electives for the Integrative Conservation major.