

FISHERIES AND AQUATIC SCIENCES SPECIALIZATION

Effective Fall 2019

[Prerequisites are listed in brackets]

Communications (3-4)

Select *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

Human Dimensions (6)

Select *two or more* of the following:

- _____ FW 3925 Human Dimensions of Fisheries and Wildlife Management; (3), Spring
- _____ ESPM 3011W Ethics in Natural Resources; (3), Fall/Spring
- _____ ESPM 3202W Env't. Conflict Mgmt, Leadership, and Planning; (3), (Jr/Sr), Spring
- _____ ESPM 3241W Natural Resource & Env. Policy; (3), (SOC), Spring
- _____ ESPM 3245 Sustainable Land Use Planning and Policy; (3), (ENV), Fall
- _____ ESPM 3271 Environmental Policy, Law & Human Behavior; (3), (SOC, CIV), Fall
- _____ FNRM 4232W Managing Recreational Lands; (4), Spring

Fisheries and Aquatic Biology (6)

Select *two or more* of the following:

- _____ FW 4401 Fish Physiology and Behavior; (3), [CHEM 1061& 1065, BIOL 2012], Fall: even years
- _____ FW 5459 Stream and River Ecology; (3), [Limnology or instructor consent], Fall: even years
- _____ FW 5601 Fisheries Population Analysis; (3), [[4001 or Stat 5021], EEB 3407, [Math 1142 or Math 1271]], Fall or FW 5051 Analysis of Populations; (4), [[4001 or STAT 3011 or ESPM 3012], [EEB 3407 or EEB 3408W or EEB 3807]], Spring

Principles (10)

- _____ FW 4136 Ichthyology; (4), [BIOL 1001 or 2012], (can be taken at the same time as FW 4401), Fall
- _____ FW 4107 Principles of Fisheries Science; (3), [Intro biology, Jr/Sr], Spring

Select *one* of the following:

- _____ FW 2003 Introduction to Marine Biology; (3) [BIOL 1009, or GEOL 1006, or instructor consent], Spring
- _____ EEB 3603 Science, Protection, and Management of Aquatic Environments; (3), [college biology], Spring
- _____ EEB 5601 Limnology; (3), [grad student or instructor consent], Fall

Other Biological Courses (3)

Select *one or more* of the following:

- _____ ENT 5361 Aquatic Insects; (4), [instructor consent], Spring
- _____ ESPM 3015 Invasive Plants and Animals; (3), Fall: odd year
- _____ FW 2003 Introduction to Marine Biology; (3) [BIOL 1009 or GEOL 1006 or instructor consent], Spring (cannot be double counted from Principles)
- _____ FW 4101 Herpetology; (4), [BIOL 1001 or 2012], Spring: odd year
- _____ VPM 3102 Aquatic-Sediment Ecological Toxicology; (3), Fall

Physical Sciences (11-13)

Option 1: Recommended for students interested in a graduate degree or planning a career focused on research.

Physics

- ___ PHYS 1101W Intro College Physics I; (4), [High school algebra, plane geometry, trigonometry], Fall/Spring
- ___ *or* PHYS 1201W Intro Physics for Biology and Pre-med I; (5), [[High school or college calculus], trigonometry, algebra], Fall/Spring/Summer

Chemistry

- ___ CHEM 1062 Chemical Principles II; (3), [at least C- in CHEM 1061 or equivalent; register for CHEM 1066], Fall/Spring/Summer
- ___ CHEM 1066 Chemical Principles II Laboratory; (1), [concurrent registration is required (or allowed) in 1062], Fall/Spring/Summer

Biochemistry/Organic Chemistry

Select one or more from the following:

- ___ ESPM 3131 Environmental Physics; (3), [PHYS 1101], Spring
- ___ BIOC 2011 Biochemistry for the Agricultural and Health Sciences; (3), [CHEM 1015, BIOL 1009], Spring
- ___ BIOC 3021 Biochemistry; (3), [[BIOL 1009 or BIOL 2003] and [CHEM 2301 or CHEM 2081/2085] or equivalent AND not a CBS student], Fall/Spring/Summer
- ___ CHEM 2101 Introductory Analytical Chemistry Lecture; (3), [CHEM 1022 or equivalent], Fall/Summer
- ___ *and* CHEM 2111 Introductory Analytical Chemistry Lab; (2), [CHEM 2101 or concurrent registration], Fall/Summer
- ___ CHEM 2301 Organic Chemistry I; (3), [C- or better in CHEM 1062/1066 or 1072H/1076H], Fall/Spring/Summer
- ___ *and* CHEM 2311 Organic Chemistry I Lab; (4), [Grade of at least C- in CHEM [2302, 2304] or [concurrent registration is required (or allowed) in 2302, concurrent registration is required (or allowed) in 2304]], Fall/Spring/Summer

Option 2: Recommended for students planning on a career in professional or managerial fields such as the fisheries aspects of watershed management, applied fisheries management or fisheries within the broader ecosystem.

- ___ PHYS 1001W Energy and the Environment; (4), [1 yr high school algebra], Fall/Spring

Chemistry/Biochemistry

Select one or more from the following:

- ___ BIOC 2011 Biochemistry for the Agricultural and Health Sciences; (3), [CHEM 1015, BIOL 1009], Spring
- ___ CHEM 1062 Chemical Principles II; (3), [at least C- in CHEM 1061 or equivalent; register for CHEM 1066], Fall/Spring/Summer
- ___ CHEM 1066 Chemical Principles II Laboratory; (1), [concurrent registration is required (or allowed) in 1062], Fall/Spring/Summer

Hydrology

Select one or more from the following:

- ___ ESPM 3111 Hydrology and Water Quality Field Methods; (3), Spring
- ___ FNRM 3114 Hydrology and Watershed Management; (3), [[BIOL 1001 or BIOL 1009], [CHEM 1015, CHEM 1017] or CHEM 1021], MATH 1151] or instr consent], Fall

Students interested in attending graduate school should consider an additional semester of organic chemistry *or* biochemistry.