Fisheries M.S.

Program Requirements

Catalog Department Overview # (https://catalog.uaf.edu/academic-departments/fisheries/)

Minimum Requirements for Fisheries M.S.: 30 credits

		Credits
General University Requirements		
Complete the graduate general university requirements. (https://catalog.uaf.edu/masters/#gurmastersdegreetext)		
Master's Degree Requirements		
Complete the master's degree requirements. (https://catalog.uaf.edu/masters/#masterofscience)		
As part of the master's degree requirements, complete the following:		
FISH F699	Thesis	6-12
Fisheries Program Requirements		
Complete the following:		
STAT F401	Regression and Analysis of Variance	4
Graduate seminars		2
Complete at least 3 credits from each of the three focal areas		9-11
Biology		
Quantitative Approaches		
Management and Human Dimensions		
Electives		
Advisor approved courses		1-9
Total Credits		**30**

Note: At least 21 credits of the required 30 M.S. degree credits must be at the F600 level. All other credits must be at least at the F400 level.

Focal Areas
Biology

		Credits
Complete at least 3 credits from the following:		
FISH F626	Behavioral Ecology of Fishes	
FISH F628	Physiological Ecology of Fishes	
FISH F633	Pacific Salmon Life Histories	
FISH F650	Fish Ecology	
FISH F651	Aquatic Conservation and Management Genetics	
FISH/MBI F676	Aquatic Food Web Ecology	
MBI F615	Physiology of Marine Organisms	
MBI F652	Marine Ecosystems	
MBI F667	Ecology and Physiology of Marine Macroalgae	

Quantitative Approaches

		Credits
Complete at least 3 credits from the following:		
FISH F604	Modern Applied Statistics for Fisheries	
FISH F621	Estimation of Fish Abundance	
FISH F622	Quantitative Fish Population Dynamics	
FISH F625	Population Dynamics of Vertebrates	
FISH F645	Bioeconomic Modeling and Fisheries Management	
FISH F670	Quantitative Analysis for Marine Policy Decisions	

Management and Human Dimensions

		Credits
Complete at least 3 credits from the following:		
FISH F411	Human Dimensions of Environmental Systems	
or FISH F611	Human Dimensions of Environmental Systems	
FISH F487	Fisheries Management	
or FISH F687	Fisheries Management	
FISH F616	Indigenous Fisheries of Alaska	
FISH F641	Ecosystem-based Fisheries Management	
FISH F671	Foundations of Marine Policy and Ocean Governance	
FISH F672	Law and Fisheries	
FISH F673	International Maritime Law and IUU Fishing	
FISH F674	Economic Development for Fish-dependent Communities	
FISH F675	Political Ecology	
FISH F681	The North Pacific Fishery Management Council	
FISH F683	The Alaska Board of Fisheries	

Admission Requirements

Complete the following general university admission requirements for graduate programs (https://catalog.uaf.edu/getting-started/admission/#graduatedegreetext).

1. Submit an application for admission
2. Submit official transcripts
3. GRE scores are not required for this program, but may be considered if submitted
4. Submit resume/curriculum vitae
5. Submit statement of academic goals
6. Submit 3 letters of recommendation

International Students: Please consult UAF's most recent application requirements regarding English language proficiency (https://catalog.uaf.edu/getting-started/admission/#english).

Additional program admission requirements and information:

- Prerequisites: calculus; elementary statistics; ichthyology, biology of fish or invertebrate zoology; and computer competency.
- It is recommended that you provide evidence of communication (oral and writing) and analytical skills. This could be shown through technical writing samples, recorded presentations, poster presentations, examples of data analyses, relevant test results, etc. Please limit the evidence provided to **two examples**

and explain how this evidence is relevant in your statement of academic goals.

- Statement of academic goals: Your statement provides the application review committee within the department an opportunity to learn about your background and motivation:
    - Any special circumstances you wish the department to consider
    - Your general research interests or special emphasis that you hope to pursue
    - Your particular reasons for applying to the Department of Fisheries at the University of Alaska Fairbanks
    - Your preparation and background, including evidence of any relevant qualifications not captured elsewhere in the application
    - Your professional goals, including longer-term career goals and your motivations for pursuing those goals
- The letters of reference should be from individuals who understand the challenges of completing a graduate program and are able to write about your ability to successfully complete graduate courses in fisheries and conduct the research, analyses, and writing needed to complete a thesis or dissertation. Ideally, these letters of recommendation should come from faculty, research staff, professionals, or individuals who are familiar with your academic or work experience and can speak to your work ethic and potential for success in our program.

Roadmaps

Catalog Department Overview # (https://catalog.uaf.edu/academic-departments/fisheries/)

Roadmaps provide suggested semester-by-semester study plans for programs and are based on full-time enrollment, unless otherwise specified.

- This roadmap should be used in conjunction with regular academic advising sessions. All students are encouraged to meet with their advisor or mentor each semester.
- Certain courses and milestones must be completed in the specified semester to ensure on-time graduation.
- Transfer credits may affect the roadmap.
- Requirements, course availability, and sequencing may change.
- Courses marked with (*) are recommended.

First Year

Fall	Credits	Spring	Credits
FISH F699[18]	3	FISH F699[18]	3
STAT F401[20]	4	Program Elective	2
		Program Elective	3
	7		**8**

Second Year

Fall	Credits	Spring	Credits
FISH F604, F621, F622, F625, F645, or F670[26]	3-4	FISH F699[18]	3
FISH F699[18]	3	Program Elective	3
Program Elective	3		
	9-10		**6**

Total Credits 30-31

Footnote Definitions

General Education Requirements	Degree Requirements	Program & Other Requirements
1—Communication	8—Alaska Native-themed	20—Program Requirement
2—Arts	9—Communication	21—Capstone Requirement
3—Humanities	10—Computation	22—Concentration Course
4—Social Sciences	11—Ethics	23—General Elective
5—Additional Arts, Humanities or Social Sciences	12—Humanities	24—Minor Course
6—Mathematics	13—Human Relations	25—Upper Division
7—Natural Sciences	14—Humanities or Social Sciences	26—Program Elective
	15—Library & Information Research	
	16—Mathematics	
	17—Natural Sciences	
	18—Other	
	19—Social Sciences	

Learning Outcomes

Catalog Department Overview # (https://catalog.uaf.edu/academic-departments/fisheries/)

Learning Outcomes are specific, measurable statements that define the knowledge and skills students will gain by the end of the program.

Graduates of this program will be able to:

- Develop a written proposal and a thesis using clear logic, language, and convincing arguments
- Deliver a professional oral presentation and respond to questions with confidence
- Obtain mastery of core knowledge of fishery science in 3 areas: (1) biology and ecology of fishes (2) quantitative population dynamics (3) human dimensions of fisheries
- Recognize assumptions, evaluate arguments and draw conclusions
- Demonstrate competence in data collection, analysis, interpretation and reporting
- Be prepared to compete successfully for admission to Ph.D. programs in fisheries or related aquatic science disciplines
- Be prepared to compete successfully for mid-level professional career positions in research/management at resource management agencies in Alaska and elsewhere
- Demonstrate the ability to prepare and publish peer-reviewed manuscripts in professional journals