



Department of  
**RANGELAND, WILDLIFE AND  
FISHERIES MANAGEMENT**

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# **UNDERGRADUATE PROGRAM OVERVIEW**

*Developing the stewards of tomorrow*



TEXAS A&M UNIVERSITY  
College of Agriculture  
& Life Sciences



TEXAS A&M UNIVERSITY  
Rangeland, Wildlife  
& Fisheries Management

# WHY RWFM?

## **A PERSON, NOT A NUMBER**

Our faculty share a strong focus on strengthening educational experiences for students, through teaching practical application of management techniques and research methods in an engaging, hands-on environment.

## **FIELD OPPORTUNITIES**

Our degree program offers students field experiences to best prepare them to be natural resources leaders. The best classroom setting is in the field. The department has several partnerships in place to offer facilitated internships, where students can experience career-specific jobs and build resume credentials for future employment. Hands-on field experience is offered in the majority of our courses to reinforce classroom principles, and our curriculum includes a two-week summer course between sophomore and junior years.

## **FINANCIAL SUPPORT**

Along with scholarships offered through the College of Agriculture and Life Sciences (<https://uwide.tamu.edu/>), we offer several department-specific scholarships, fellowships and student employment opportunities.

## **ACADEMIC SUPPORT**

Our team of academic professionals include both internal and external experts. Department faculty include leading range, wildlife and fisheries researchers, human dimensions and policy professors, AgriLife Extension Specialists and industry professionals. Applied practitioners deliver our educational program.

## **CAREER PATHWAY**

We offer a foundational undergraduate degree that allows students to competitively pursue natural resource careers with various state and federal agencies or venture into private management and non-governmental organizations. Program graduates will have background and experience to continue their education in graduate studies or apply their skills and background in research-oriented careers.

## **PROFESSIONAL SOCIETY ENGAGEMENT**

Student chapters of professional organizations, such as the Society for Range Management, The Wildlife Society, and the American Fisheries Society, provide students with opportunities to gain leadership skills through department and professional society-sponsored extracurricular activities, including professional meetings, student clubs and competitive teams, to name a few. Our undergraduate curriculum is tailored for students to receive professional certification through these organizations.



A person with blonde hair, wearing a dark patterned face mask and light blue nitrile gloves, is holding a small bird with black and white feathers and a red forehead on their gloved hand. They are also holding a black smartphone in their other gloved hand. The background is a blurred natural setting.

# UNDERGRADUATE PROGRAM: OVERVIEW

The Department of Rangeland, Wildlife and Fisheries Management (RWFM) promotes the stewardship of natural resources for present and future generations through the University Land-Grant mission. Our faculty are dedicated to generating sound scientific research, translating and hosting science-based conversations, and developing the next generation of stewardship professionals. RWFM aims to teach the latest ecological and management principles to provide the most diverse and application-based education available in natural resource conservation.

The strength of the *Bachelor of Science in Rangeland, Wildlife and Fisheries Management* lies in the breadth of its course offerings with emphasis on experiential learning and a shared core curriculum that provides all students with foundational knowledge in biological, physical and social sciences. Through fieldwork, research and internships, students experience a range of learning opportunities that extend beyond the traditional classroom, preparing them for real-world application of the natural sciences. Our undergraduate program sets students up for success in the competitive job market in addition to preparing them for continued professional and graduate studies.

In response to the complexity and diversity of the field, the B.S. in RWFM offers five unique specialization tracks to further tailor a student's degree to best meet future career goals. Read more about our unique tracks and other program highlights in the following sections.

Information on Admissions and Transfer requirements can be found at:  
*Admissions:* <https://admissions.tamu.edu/apply>



# RANGELAND MANAGEMENT

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This track combines the disciplines of ecology and range management to improve the function and stewardship of rangelands, while promoting conservation benefits to similar systems around the world. The curriculum focuses on fundamental ecological and rangeland management principles used in grazing management, wildlife habitat management, watershed improvements, invasive exotic plant control, native plant restoration and prescribed fire. An immersive summer field techniques course providing intense field experiences to solidify principles students will need to pursue advanced coursework in focal management areas.

## CAREER PATHWAY

The Society for Range Management has recognized this degree track as an accredited program. Upon graduation students will meet the basic educational qualifications to apply to become a Certified Professional in Range Management. Students will be prepared to seek employment with government agencies, such as the Natural Resources Conservation Service, or head into environmental and natural resources consulting, or private sector ranch management.





# WILDLIFE MANAGEMENT

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This track builds a strong foundation in managing wildlife populations and their habitats, with courses targeting key topics such as wildlife population dynamics, anatomy and physiology, habitat management principles and wildlife techniques. This program prepares students to lead in the wildlife profession through advanced technical and leadership skills, professional communication, and scientific expertise. The curriculum includes a summer field techniques course and internship requirement to provide intensive field experiences and cement key principles needed to successfully advance through the program and career field.

## CAREER PATHWAY

Upon graduation, students will meet the basic educational qualifications to apply for The Wildlife Society's Associate Wildlife Biologist certification. Students will be prepared to seek employment with government agencies, such as Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service, or venture into biological consulting, environmental non-profit agencies or research-oriented professions.







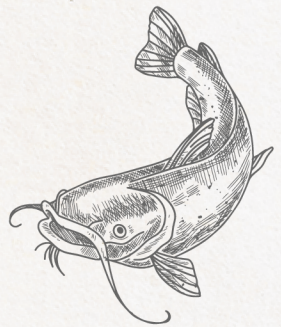
# AQUACULTURE AND FISHERIES MANAGEMENT

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This track blends chemistry, mathematics and biology with the advanced techniques necessary to sustainably manage wild fish populations or inland fishery and aquaculture operations. The track focuses on the integration of applied fisheries management and aquaculture production disciplines, preparing students to handle traditional and emerging complex issues. Core areas of study include fish biology and disease, hatchery management, commercial aquaculture production, restoration and stock enhancement aquaculture, aquatic ecosystem management and water quality management.

## CAREER PATHWAY

Upon graduation, students will meet the certification requirements for the American Fisheries Society's Associate Fisheries Professional certification. Students will be prepared to seek employment in a variety of careers spanning government agencies, such as Texas Parks and Wildlife Department and the U.S. Fish and Wildlife Service, or private aquaculture operations.







# NATURAL RESOURCES MANAGEMENT AND POLICY

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This track prepares students to examine environmental and conservation issues through the lens of political, cultural, social, economic, regulatory and ecological dimensions. Courses promote the development of technical and leadership skills needed to create conservation partnerships and support broad policy and regulatory activities. These critical skills are exercised in the classroom in addition to field and professional experiences offered in the program, enhancing the students' ability to assess complex environmental issues, envision a desired conservation outcome, and design and implement planning processes.

## CAREER PATHWAY

The diverse coursework of this track prepares students for a variety of careers in industries such as public service, outdoor education, park and protected area management, environmental planning and consultation, and environmental non-profit organizations.





# OUTDOOR ENTERPRISE MANAGEMENT

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This track is a cross-disciplinary program that provides training in the basic principles of wildlife and fisheries ecology, hospitality and food services and business management. Students take foundational courses within RWFM as well as key courses in the departments of Agricultural Economics and Hospitality, Hotel Management and Tourism to learn key knowledge and skills to successfully work in the outdoor-based sector.

## CAREER PATHWAY

Following graduation, students are prepared to pursue employment in a multitude of jobs at hunting and fishing lodges, ranches, corporate retreat facilities and other outdoor-based enterprises worldwide.



# ADVANCED DEGREES & ADD ONS

Students interested in professional growth through additional education opportunities have options within RWFM to earn a graduate degree and/or certificate in tandem with their Bachelor of Science.

## WILDLIFE CONSERVATION AND POLICY PROGRAM (3+2)

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This unique, five-year joint-degree program with The Bush School of Government and Public Service enables undergraduate students in RWFM to earn a Bachelor of Science in three years followed by a Master of Public Service and Administration in two years. The program integrates the science and practice of managing fish and wildlife populations with policies for these public resources on both public and private lands. Graduates are prepared for careers in conservation with a foundation in life and physical sciences, mathematics and problem-solving skills that accommodate animals and their habitats within larger ecological systems.





# MASTER OF NATURAL RESOURCES (FAST TRACK, 4+1)

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RWFM students have the option to pursue a Master in Natural Resources (non-thesis) following their junior year. This degree is offered as a mix of on-campus and distance-based courses, or 100% distance-based, making it ideal for those needing flexibility. The curricula promote critical problem-solving skills necessary in natural resource conservation, along with developing a strong foundational understanding of the interrelationships among ecology, policy and human dimensions. To fit their career goals, students can tailor their degree plan to emphasize either policy or applied research and management or pursue a thesis-option. Specific workforce skills and additional certifications are offered as part of this program.

## MINORS AND CERTIFICATES

RWFM, along with other Texas A&M University departments, offer an array of degree minors and certificates that can be achieved in unison with a student's degree plan. Pursuing a minor or certificate allows students to add a secondary focus/field to their curriculum, providing students career-specific credentials needed to stand out post-graduation. See our website for more details.





# HIGH-IMPACT LEARNING

High-impact learning provides students with enhanced educational experiences beyond the traditional classroom. This learning practice immerses students with hands-on experiences that promote working closely with diverse individuals and engaging in field-based problem solving, which enriches the learning experience. High-impact learning often results in improved grade point averages and increased student engagement in their education. These experiences include:

- ***Study abroad***- Faculty-led programs centered on natural resource management within diverse cultural environmental and socio-cultural contexts.
- ***Internships***- Professional training and career preparation through opportunities across the nation.
- ***Undergraduate research***- Faculty-mentored research that addresses an array of natural resource issues.
- ***Summer field techniques course***- An intensive two-week field experience at one or more of the RWFM teaching and research facilities and partner organizations across the state.



# STUDENT ORGANIZATIONS

## THE RANGE CLUB

The Range Club (which includes the *Plant ID* and *Undergraduate Range Management Exam* teams) is a student organization associated with the professional Society of Range Management. This club encourages the professional development of students through a variety of team and club activities and promotes the wise management of rangelands and natural resources of Texas, the United States and the World. More information can be found at: [www.facebook.com/TAMURangeClub](http://www.facebook.com/TAMURangeClub)

## THE WILDLIFE SOCIETY

The TAMU chapter of The Wildlife Society serves as professional organization for wildlife biology students. Society events and meetings encourage communication between members, non-members and professionals to create an atmosphere where an understanding of career opportunities in resource management can be shared and professional experiences be gained. The student chapter takes the students' interests to heart and provides information and links to vital new opportunities involving wildlife conservation, research and management. More information can be found at: [www.facebook.com/TAMUTWS](http://www.facebook.com/TAMUTWS)

## AMERICAN FISHERIES SOCIETY

The TAMU chapter of the American Fisheries Society serves as the professional organization for fishery students. The student chapter promotes the conservation and wise use of fisheries resources and supports the teaching of fisheries science and field experiences for student members. More information can be found at: [www.facebook.com/TAMUAFS](http://www.facebook.com/TAMUAFS)

# RESEACH AND TEACHING FACILITIES



## **AQUACULTURAL RESEARCH AND TEACHING FACILITY**

Only 10 miles from main campus, this site is equipped with more than 200 extensive flow-through and recirculating tank systems and a variety of modern research equipment for work in areas of nutrition, bioenergetics, environmental physiology and developmental biology. Site facilities include indoor laboratories, hatcheries for red drum and other species, and a 36-pond complex.



## **CHOCOLATE BAYOU RESEARCH AND DEMONSTRATION FARM**

Located in Brazoria County, TX, within the Coastal Prairies ecoregion, the 2,500 acre-property is a mix of constructed wetlands, flowing water and rangelands. This property is managed as a living demonstration site for sound wildlife management in addition to active agricultural production (i.e., grazing). Site facilities includes cattle working pens.

Our research and teaching facilities offer students multiuse, off-campus field and indoor laboratories to support degree coursework and student research projects. Students can also utilize the numerous AgriLife Extension and Research Centers.

### **ECOLOGICAL AND NATURAL RESOURCES TEACHING AREA**

Just a few miles from main campus, this site consists of nearly 1,000 acres, characterized by gently rolling hills with a mix of upland forest, open grasslands and riparian streams typical of the Post Oak Savannah. This outdoor classroom supports RWFM courses in addition to various research projects by RWFM students and faculty. Site facilities include indoor classrooms and storage buildings.



### **LA COPITA DEMONSTRATION RANCH AND RESEARCH AREA**

Located 40 miles west of Corpus Christi, TX, the 2,700 acre-property is in a transition zone between the northeastern portion of the central Rio Grande Plain and the Gulf Prairie and Marshes. The property is ideal for studying the multifaceted challenges of grazing land and natural resources management in South Texas. Site facilities include a bunk house, indoor classroom space and storage buildings.





# CAREER PROFILES

We facilitate the journey from student to professional, offering experiences and opportunities that will best prepare students for diverse careers in public or private sectors, serving in a variety of capacities. Here we describe common career paths taken by our graduates.



## RESEARCH SCIENTIST

Research scientists are often specialists in their field of interest, often earning master's and doctoral degrees in their specific field of interest. They are often employed by federal agencies like the U.S. Fish and Wildlife Service, private consulting firms, universities, and various research institutes focused on conservation and ecology. They are often responsible for applying for scientific grants, leading long-term research projects, publishing their research in scientific journals, and presenting their research at conferences. In addition to their own research, they will usually teach courses at a university as an assistant or associate professor.

# WILDLIFE OR FISHERIES BIOLOGIST

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Biologists specialize in the scientific study of organisms, their jobs either consisting in scientific research or applying the findings of research within their fields. Biologists work to protect biodiversity, often with threatened and endangered species, specializing in a group of species or specific habitats in which the species live. They work in the outdoors collecting data and implementing monitoring or management techniques, in addition to working in indoor laboratories, analyzing their data from the field, writing reports on their findings, and coordinating with other biologists, researchers and agencies. Biologists often work for federal and state agencies such as the Texas Parks and Wildlife Department, the U.S. Fish and Wildlife Service, the U.S. Forest Service, the Natural Resources Conservation Service, National Oceanic and Atmospheric Administration and the National Park Service. They also work for private conservation groups and consulting firms.





## RANCH MANAGER

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Ranch managers are key to the success of private lands, especially in states that primarily consist of private lands, including Texas. They are often responsible for overseeing livestock, crop or dairy operations, implementing land and wildlife management techniques, managing hunting programs, and coordinating ranch personnel. They often work for privately owned ranches in rural areas.



## ENVIRONMENTAL LOBBYIST

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Environmental lobbyists work to persuade politicians to pass laws, policies, and regulations for a cleaner environment. They accomplish this by developing campaigns, advocating, fundraising, and creating advertising campaigns aimed to make a difference on political and environmental issues. Their job involves many meetings and coordination with legislators, representing their organization at media events as well preparing press releases and information literature. To succeed as a lobbyist, they often are skilled organizers, communicators, and well-versed in environmental legislation, research, and current events.

## GAME WARDEN

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Game wardens are responsible for patrolling assigned areas to prevent fish and game law violations. They investigate reports of damage to crops or property by wildlife and compile biological data for subsequent reports and management information. They are most commonly employed by state and local governments, such as the Texas Parks and Wildlife Department.



## OUTDOOR EDUCATOR

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Outdoor educators are responsible for educating the public about environmental science and issues, ecology, and wildlife. They often work with school-aged children, engaging with them on a daily basis with lesson plans, environmental focused activities, and may handle ambassador animals. They often work for non-profits, local education centers, or federal and state agencies.







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# WANT TO LEARN MORE?



## **RWFM Advising**

Hours: 8:00 a.m. to 12:00 p.m., 1:00 p.m. to 5:00 p.m.

Wildlife, Fisheries & Ecological Sciences Building, Room 112

Schedule an appointment: ***[rwfm.tamu.edu/advising](http://rwfm.tamu.edu/advising)***

## **DEPARTMENT ADMINISTRATION**

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