

MASTER OF SCIENCE IN TOXICOLOGY, PLAN A

Requirements Effective Fall 2026

Code	Title	Credits
Core Courses:		
ERHS 502	Fundamentals of Toxicology	3
ERHS 521	Toxicological Pathology	3
ERHS 522	Metabolism and Disposition of Toxic Agents	3
ERHS 523	Toxicological Mechanisms	3
ERHS 693C	Research Seminar: Toxicology	1
Toxicology Courses (select a minimum of 9 credits from the following): ^{1,2}		9
BMS 450	Pharmacology	
ERHS 446	Environmental Toxicology	
ERHS 448	Environmental Contaminants	
ERHS 504	Occupational and Environmental Toxicology	
ERHS 507A	Toxicology Toolbox: Fundamentals	
ERHS 507B	Toxicology Toolbox: Metabolism and Disposition	
ERHS 513	Environmental Carcinogenesis	
ERHS 520	Environmental and Occupational Health Issues	
ERHS 532 or PBHL 570	Epidemiologic Methods Epidemiology for Public Health	
ERHS 535 or ERHS 537A	R Programming for Research R Programming: Research I	
ERHS 546	Environmental Exposure Assessment	
ERHS 547	Equipment and Instrumentation	
ERHS 549	Environmental Health Risk Assessment	
ERHS 565	Chemical and Biological Warfare Agents	
ERHS 566	Forensic Toxicology	
ERHS 567	Cell and Molecular Toxicology Techniques	
ERHS 568	Pharmaceutical and Regulatory Toxicology	
ERHS 569	Immunotoxicology	
ERHS 658	Environmental and Occupational Epidemiology	
Thesis:		
ERHS 699	Thesis	3-5
Other Requirements:		
Electives ^{1,2}		3-5
Courses selected based upon the student's scientific and professional interests. Approval of the advisor is required.		
Examples of elective courses which complement those taken to meet program requirements include:		
BC 463	Molecular Genetics	
or BC 563	Molecular Genetics	
BC 465	Molecular Regulation of Cell Function	

or BC 565	Molecular Regulation of Cell Function
BMS 405	Nerve and Muscle-Toxins, Trauma and Disease
BMS 409	Human and Animal Reproductive Biology
BMS 420	Cardiopulmonary Physiology
BMS 430	Endocrinology
BMS 500	Mammalian Physiology I
BMS 501	Mammalian Physiology II
BMS 545	Neuroanatomy
BMS 640	Reproductive Physiology and Endocrinology
CM 501	Advanced Cell Biology
CM 510	Introduction to Cell and Molecular Biology
ECOL 610	Ecosystem Ecology
ERHS 526	Industrial Hygiene
ERHS 596C	Group Study: Toxicology
ERHS 695C	Independent Study: Toxicology
FSHN 530	Principles of Nutrition Science & Metabolism
FW 544	Ecotoxicology
MIP 555	Principles and Mechanisms of Disease
NB 502	Molecular and Cellular Neurobiology
Any additional course(s) from the Toxicology Electives list beyond the 9 credit requirement	

Program Total Credits: 30

A minimum of 30 credits are required to complete this program.

¹ No more than 6 credits of courses below 500-level may be included in the program.

² No more than a total of 3 credits of Internship, Independent Study, Group Study, and Research courses may be included in the program.

Non-Coursework Requirements

Advisor

Students are encouraged to select their major advisor during the first semester, but must do so no later than the end of the second semester. Selection of the major advisor will establish a personal and professional relationship that will have a major impact on the student's growth and subsequent career. The choice of advisor should be based on personal interviews and a familiarity with both the professor's past work and planned work in which the student is likely to be involved. The selection must be mutually acceptable to the student and faculty, and must be approved by the Department Head as indicated on the student's GS6 form. Major advisors must have their primary appointment in Toxicology and have a faculty appointment. Mentors outside of Toxicology are eligible to serve as a student's co-advisors, but not as primary advisor.

Graduate Advisory Committee

The Graduate Advisory Committee for the degree of Master of Science must consist of at least three faculty members. The members are as follows: 1) the advisor who serves as chairperson of the committee and who must hold an academic faculty rank as a professor, associate professor, or assistant professor within the department; 2) one or more additional members from Toxicology or ERHS; and 3) one member from an outside department who, appointed by the Graduate School Dean, represents the Graduate School. The outside committee member must hold a tenure/tenure-track, non-tenure track, transitional, joint, or

emeritus faculty appointment at Colorado State University. ERHS faculty affiliates are considered members of ERHS and cannot serve as the outside committee member. Individuals who are not academic faculty but who have special expertise may serve on committees in addition to the prescribed members - however may not vote regarding examination results. The GS6 form detailing the committee must be filed with the Graduate School before the student can register for their fourth semester.

Seminar Requirement

All candidates for the M.S. degree are required to complete a minimum of one credit of a seminar course. Eligible seminar courses include all approved university course listings in seminar format, organized journal clubs taught as Group Studies, CM 792 and ERHS 692. The Graduate Education Committee or individual programs may require additional credits of seminar courses.

Thesis Requirement

Students are required to prepare a thesis based upon research conducted during their program of study that contributes area knowledge. Requires approval of a research proposal, data collection/analysis, and formal oral defense.

Oral Defense Presentation

Each candidate for a Master plan A degree must pass an oral final examination at least five weeks before the expected graduation. This is a public presentation to present research findings with a Q&A session.