

University of South Florida, College of Public Health

Department of Environmental & Occupational Health

MPH: Toxicology/Risk Assessment

This concentration area will provide a broad foundation in the biomedical sciences with general training in toxicology. The program is designed with a balanced curriculum in the areas necessary for understanding the response of organisms to chemical insult and to introduce individuals in the research approaches necessary for the evaluation of these responses. Students will be able to make decisions on the basis of available research findings on potential chemical hazards for humans and animals and to adapt to a rapidly growing body of new knowledge in toxicology.

In addition to the overall **Master of Public Health** degree objectives, *Toxicology / Risk Assessment* graduates will be able to:

1. Recognize toxicological responses to chemical insult;
2. Identify chemical hazards, and how their physical and chemical properties influence and interact with the environment, and in turn, the human body;
3. Recognize uses and limitations of animals for toxicity testing and inferences that can be made for human health effects;
4. Analyze risks associated with chemical exposures, both environmental and occupational, and methods of intervention and prevention;
5. Identify pathways and pharmacological aspects of chemical exposure;
6. Identify the role of toxicologists in public health, medical, environmental and industrial sectors;
7. Interpret and translate research findings and apply to problems arising from chemical pollution;
8. Identify various laboratory techniques to evaluate chemical, biological and radiological hazards;
9. Build communication skills, both written and verbal;
10. Interpret the similarities and differences in the approaches taken by other public health disciplines, and social and behavioral sciences, in the study of health-related problems; and
11. Apply ethical principles guiding the conduct of research on human subjects, including principles for ethical decision-making beyond the regulatory purview of institutional review boards.

Association between courses and the competencies for
MPH with a Toxicology/Risk Assessment Concentration

Courses	Competencies											
	1	2	3	4	5	6	7	8	9	10	11	
Required concentration courses (0 credits)												
HSC 6556 Pathobiology of Human Disease I	x				x	x		x	x	x		x
PHC 6353 Environmental Risk Assessment	x	x	x	x	x	x	x	x	x			x
PHC 6310 Environmental & Occupational Toxicology	x	x	x	x	x	x	x	x	x	x	x	x
PHC 6359 Xenobiotic Metabolism in EOH	x	x	x	x		x		x	x	x		
PHC 6369 Industrial Toxicology	x	x	x	x		x		x	x	x		
PHC 6350 Occupational Health Risk Assessment	x	x	x	x	x	x	x	x	x	x		
PHC 6934 Special Topics in Public Health		x		x				x	x	x		
PHC 6930 Public Health Seminar						x				x		x
HSC 6557 Pathobiology of Human Disease II	x	x			x				x	x		x

College of Public Health - Program Curriculum Checksheet

Name: _____ **Dept:** **EOH**
Advisor: _____ **Degree:** **MPH**
Semester/Year Accepted: _____ **Concentration:** **Toxicology / Risk Assessment**

Any grade below a C (C- to F) is required to be retaken. The grade will be included in the student's GPA.

Prerequisites (not included in total GPA hours)			Total Needed	3	Grade	Sem/Yr Taken
HSC	4551	Survey of Human Diseases		3		
College Core Courses			Total Needed	15		
PHC	6000	Epidemiology		3		
PHC	6050	Biostatistics I		3		
PHC	6102	Principles of Health Policy and Management		3		
PHC	6357	Environmental and Occupational Health		3		
PHC	6410	Social and Behavioral Sciences Applied to Health		3		
Required Concentration Courses			Total Needed	22		
HSC	6556	Pathobiology of Human Disease I		3		
PHC	6353	Environmental Risk Assessment		2		
PHC	6310	Environmental and Occupational Toxicology		3		
PHC	6359	Xenobiotic Metabolism in Environmental and Occupational Health		3		
PHC	6369	Industrial Toxicology		2		
PHC	6350	Occupational Health Risk Assessment		3		
PHC	6934	Special Topics in Public Health		2		
PHC	6930	Public Health Seminar		1		
HSC	6557	Pathobiology of Human Disease II		3		
Culminating Experiences						
PHC	6945	Supervised Field Experience (2-12 credits)				
PHC	6977	Special Project		3		
PHC	6936	Public Health Capstone Course		3		
-	-	Concentration Exam (no credit, 2 credit hours of enrollment required)		-		
Minimum 43 credit hours (not including field experience)			Total GPA Hours			GPA
			Total Hours Attempted			