WHAT DO TOXICOLOGISTS DO?
Toxicologists study how humans—as complex heterogeneous biological systems—are affected by, respond and adapt to their environment. Through scientific research, they investigate the role of the environment in disease. The results can be used to influence new technologies and policies that monitor and protect human health, as well as other advancements.

EXAMPLES OF QUESTIONS TOXICOLOGISTS TACKLE:
- Does alcohol consumption damage DNA?
- How do tobacco smoke chemicals initiate cancer?
- Do chemicals in processed food induce tumors?
- How toxic are various air pollutants in our environment?
- Are there individual differences in cancer risk due to tobacco use?
- Are e-cigarettes harmful to human health?

CURRICULUM & PROGRAM FORMAT
The Toxicology PhD program requires 54 credits, which includes a 24 credit doctoral thesis and a minimum of 6 elective credits.

The program involves one year of intensive coursework that culminates in completion of the preliminary written and oral exams. Students begin dissertation research by the beginning of their second year and will be expected to graduate within four years of entering the program.

ADVANTAGES OF THE PROGRAM
Strong support from a multi-tiered mentoring system. Each student has an academic mentor, a research adviser and a professional mentor.

Interdisciplinary. The program is housed in the School of Public Health, providing a solid foundation in systems thinking, public health concepts, and policy.

Career and impact focused. Students complete thorough training in the scientific method to create research and experiments that have real impact.

Top-notch facilities. Take advantage of our state-of-the-art laboratories.

Dynamic community. The Twin Cities is home to an unusually rich community of toxicologists who provide professional mentorship, career opportunities, and information about the changing needs for research in and applications of toxicology.
TOXICOLOGY CAREERS
The employment outlook for PhD toxicologists is outstanding. All of our graduates have been placed in careers that span a variety of fields and leadership positions. The program allows flexibility to explore several different career paths such as:

- **University professor**: investigate, research and teach.
- **Government**: develop risk assessments.
- **Government regulatory agencies**: research and influence policy.
- **Industry**: research and develop risk assessments.
- **Consulting**: review research to support policy changes. Drug companies: review drug safety.

POSITIONS HELD BY GRADUATES

**3M**
Senior Toxicologist

**Chevron Corporation**
Toxicologist

**Medtronic**
Distinguished Toxicologist and Technical Fellow

**Metropolitan Airports Commission**
Senior Safety Specialist

**Illinois State University**
Assistant Professor of Environmental Health

**Minnesota Department of Health**
Senior Epidemiologist

**Cardno ChemRisk**
Senior Health Scientist

FACULTY PROFILE

**Lisa Peterson**

Lisa Peterson's research focuses on genotoxic and nongenotoxic mechanisms by which chemicals initiate cancer. The projects apply organic, biological and analytical chemical methods to this problem. She is particularly interested in studying the events beyond DNA alkylation that contribute to the carcinogenic properties of chemicals.

ADMISSIONS

**APPLICATION REQUIREMENTS**

- Statement of Purpose and Objectives
- Official transcripts
- Official GRE scores
- Resume or C.V.
- 3 letters of recommendation

**PREREQUISITES**

Prospective students must have a BA/BS degree in a basic science from an accredited institution of higher education. Previous coursework must include organic chemistry, biochemistry, and cell biology.

**RECOMMENDATIONS**

Applicants must have a strong academic background in basic sciences from an accredited institution of higher education.

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