Students graduate from Virginia Tech’s Translational Biology, Medicine, and Health doctoral program with deep expertise in their specialization, as well as a clear understanding of how to apply their knowledge across multiple fields.
Learn to solve real-world problems from the lab bench, the hospital, and beyond.

Program Curriculum

The TBMH curriculum emphasizes the concept of translational science across multiple levels of inquiry. Students learn the wide breadth of science, from basic research to clinical application and policy implementation, before diving deeply into one focus area.

Foundation Work

Students begin their studies in a specially designed gateway course that introduces them to a range of topics spanning molecules, systems, populations, and policy. Additionally, students build interdisciplinary skills through seminars and professional development training. This serves as their foundation in translational science and provides the springboard for each student to pursue their chosen focus area.

Earned Expertise

In their second semester, students choose to focus their studies in one of our six focus areas. They pursue coursework to learn the fundamentals of that specialization with a continued emphasis on the process by which research findings translate into effective therapeutics. Students continue to deepen their expertise through elective coursework and their dissertation research.

Focus Areas

Cancer
Students work to combat cancer through research. Coursework takes an integrative, translational approach to all aspects of neoplastic disease, from genetics to treatment to its social, and economic consequences.

Development, Aging, & Repair
Students carry out innovative research to address challenges facing our developing and aging populations, focusing on the fundamental processes of healthy development and how they change across the lifespan.

Health Implementation Science
Students conduct evidence-based research to develop, implement, and enhance the effectiveness and efficiency of health interventions to maximize impact in medical practice and community settings.

Immunity & Infectious Disease
Students explore immune mechanisms and microorganisms that contribute to healthy function, causes leading to dysfunction, and current and evolving approaches to therapeutic development.

Metabolic & Cardiovascular Science
Students develop a comprehensive understanding of metabolic and cardiovascular physiology, and their interaction, with an emphasis on the translation of basic scientific discoveries into practical applications.

Neuroscience
Students study the biological processes that underpin healthy nervous system and psychological function. Students choose molecular and/or cognitive neuroscience coursework, and pursue research options in addiction recovery, neuroimaging, neurotransmission, and more.

Admissions

Competitive applicants will have:
• A minimum of a bachelor’s degree from an accredited college or university, in a relevant discipline
• A GPA of 3.5 or greater (on a 4.0 scale)
• GRE exam scores in the upper quartile
• Research experience in a relevant discipline

All undergraduate and graduate transcripts, as well as GRE scores, curriculum vitae, a written personal statement, and three letters of recommendation, are required for admission.

Apply now: www.tbmh.vt.edu/admissions

TBMH students engage collaboratively with medical students, faculty researchers, medical practitioners, and industry leaders to work toward human health discoveries and solutions.