Vanderbilt MPH Program

SPRING 2019: New Elective Courses

Spring 2019 course information is available in YES; course registration opens October 31, 2018.

Instructions for course registration can be found in the MPH Student Handbook on the website under Current Students (medschool.vanderbilt.edu/mph/course-registration).

**PUBH 5560-01 Data Science for Learning Health Systems** (1 credit hour)

04/10-05/01, Mondays and Wednesdays, 3 to 5 p.m.  
Instructor: Everson  
MPH Classroom #2600, Village at Vanderbilt

*This is an elective course for students in all three tracks of the MPH Program.*

This course is designed to provide an intuition-based primer in using rapidly growing biomedical data to support continuous learning in healthcare. Students will gain a conceptual overview of the Learning Health System and the infrastructure necessary to support its development. Students will also be exposed to key concepts in data science, ‘big data’, and the application of diverse methodologies to improve the quality of healthcare outside of traditional clinical trials and related approaches. No prior experience in data science is necessary, but an introductory statistics course will be helpful.

**PUBH 5512-01 Decision Analysis in Medicine and Public Health** (3 credit hours)

01/09-04/03, Wednesdays, 1 to 4 p.m.  
Instructors: Penson, Leech  
MPH Classroom #2600, Village at Vanderbilt

*This is an elective course for students in all three tracks of the MPH Program.*

This course provides an overview of qualitative and quantitative decision making with a dominant focus on quantitative techniques, using clinical and economic endpoints and their role in clinical strategies of care and health policy. Topics include cognitive heuristics, Bayes’ theorem, ROC analysis, the study of diagnostic tests, meta-analysis, health states and utility measurement using expected value decision making, decision tree analysis, Markov processes and network simulation modeling, quantitative management of uncertainty, cost theory and accounting, cost-effectiveness and cost-utility analysis.

**PUBH 5565-01 Implementation Science** (2 credit hours)

01/07-04/08, Mondays, 2:10 to 5 p.m.  
Instructors: Audet, Prusaczyk  
MPH Classroom #2600, Village at Vanderbilt

*This is an elective course for students in all three tracks of the MPH Program.*

This course serves as an introduction to the field of dissemination and implementation research. Students will learn the foundations of D&I including its theoretical underpinnings as well as how to design and conduct an implementation study. Additional topics such as conducting D&I in community and public health settings, policy settings, and the global context will also be covered.

Contact  
Annie Smart, annie.smart@vanderbilt.edu

Course Registration Instructions  
medschool.vanderbilt.edu/mph/course-registration

Enrollment Bulletin  
vanderbilt.edu/enrollmentbulletin

YES  
yes.vanderbilt.edu