VTMI - VETERINARY MICROBIOLOGY

VTMI 610/VIBS 610 Epidemiologic Methods II and Data Analysis
Credits 4. 3 Lecture Hours. 3 Lab Hours.
Principles and methods for the analysis of data from epidemiologic studies including the purpose of data analysis and role of statistics, sampling distributions, probability distributions, analysis of crude, stratified and matched data, and the use of linear and logistic regression methods.
Prerequisites: VIBS 608 and STAT 651 or approval of instructor.
Cross Listing: VIBS 610/VTMI 610.

VTMI 614 Fermentation and Gastrointestinal Microbiology
Credits 3. 3 Lecture Hours.
Fermentation and gastrointestinal ecosystems in terms of microorganisms present, their activities and requirements and their interactions in a dynamic system.
Prerequisite: Beginning microbiology and/or biochemistry or approval of instructor.
Cross Listing: POSC 614 and NUTR 614.

VTMI 615 Immunogenetics and Comparative Immunology
Credits 3. 3 Lecture Hours.
Genetic mechanisms used to diversify immune receptors; immunoglobulins, T cell receptors, major histocompatibility complex, natural killer cell receptors, toll-like receptors and many others; selected comparative and veterinary examples of different immune recognition systems; evolution of the immune system; theoretical immune surveillance and vaccine development.
Prerequisite: Graduate classification; GENE 320/BIMS 320 and VTPB 409, or equivalent, or approval of instructor.

VTMI 619 Molecular Methods for Microbial Characterization
Credits 3. 2 Lecture Hours. 2 Lab Hours.
Underlying principles of molecular methods for microbial detection and characterization in natural and man-made ecosystems; emphasis on method application and data interpretation; emphasis on microbial pathogens and indicator organisms in foods and environment; laboratory covers select protocols.
Prerequisite: FSTC 326/ANSC 326; SCSC 405; POSC 429; approval of instructor.
Cross Listing: SCSC 619, FSTC 619 and POSC 619.

VTMI 621 Advanced Human Genetics
Credits 3. 3 Lecture Hours.
Rigorous, analytical approach to genetic analysis of humans; diagnosis and management of genetic disease in humans; transmission of genes in human populations; human cytogenetics; the structure of human genes; human gene mapping; molecular analysis of genetic disease; genetics screening and counseling.
Prerequisite: GENE 603, VTMI 613, or equivalent.

VTMI 626 Disease Detection, Surveillance and Risk Assessment
Credits 4. 3 Lecture Hours. 2 Lab Hours.
Animal health and food safety diagnostic test evaluation, disease surveillance design and analysis and quantitative risk assessment.
Prerequisites: STAT 651 or equivalent, or approval of instructor.
VTMI 663/MPIM 663 Molecular Biology of Viruses
Credits 3. 3 Lecture Hours.
In-depth studies of the biochemistry and the replication strategies of viruses and molecular mechanisms of pathogenesis for selected viral systems.
Prerequisite: Graduate classification in pathology, molecular biology, biochemistry, or approval of instructor.
Cross Listing: MPIM 663/VTMI 663.

VTMI 681 Seminar
Credit 1. 1 Lecture Hour.
Review and discussion of current scientific work and research in field of microbiology and related subjects.
Prerequisite: Approval of instructor.

VTMI 685 Directed Studies
Credits 1 to 4. 1 to 4 Other Hours.
Problems course in microbiology.
Prerequisite: Approval of instructor.

VTMI 689 Special Topics in...
Credits 1 to 4. 1 to 4 Lecture Hours.
Selected topics in an identified area of veterinary microbiology. May be repeated for credit.
Prerequisite: Approval of instructor.

VTMI 691 Research
Credits 1 to 23. 1 to 23 Other Hours.
Research for thesis or dissertation.