

# MASTERS PREVENTIVE VETERINARY MEDICINE (MPM)

School of Veterinary Medicine

## MPM 200 – Introduction to Information Management for Epidemiologists (1 unit)

**Course Description:** Introduction to practical application of epidemiological methods to solve problems involving population health data. Emphasis on using worksheet/database software tools for organizing, analyzing, reporting, and interpreting data. Ten, three-hour sessions.

**Learning Activities:** Laboratory 1 hour(s).

**Enrollment Restriction(s):** Restricted to students in the Master of Preventive Veterinary Medicine program.

**Grade Mode:** Letter.

## MPM 201 – Emerging Issues at the Interface of Animal, Human, & Ecosystem Health (2.5 units)

**Course Description:** Introduce one health topics emphasizing relationships between environmental, animal and human health. Topics include ecosystem change and impacts on animals and humans, cross-species disease transmission and approaches for addressing critical data gaps to inform ecosystem health and disease prevention.

**Learning Activities:** Lecture 1 hour(s), Discussion 1.50 hour(s).

**Enrollment Restriction(s):** Limited to 35 students.

**Grade Mode:** Letter.

## MPM 202 – Medical Statistics I (4 units)

**Course Description:** Basic statistics in clinical, laboratory and population medicine: descriptive statistics; probability; binomial, Poisson, normal, t-, F-, and Chi-square distributions; sampling distributions; parameter estimation; hypothesis testing; elementary nonparametric methods, simple linear regression and correlation; life table construction and analysis.

**Prerequisite(s):** MPVM or MPH standing or consent of instructor.

**Learning Activities:** Lecture 15 hour(s), Laboratory 10 hour(s).

**Enrollment Restriction(s):** Restricted to 80 students.

**Grade Mode:** Letter.

## MPM 203 – Medical Statistics II (4 units)

**Course Description:** Continuation of MPM 202. Analysis of variance in biomedical sciences; nonparametric methods; multiple regression; unconditional logistic regression; biomedical applications of statistical methods. Microcomputer applications in population medicine to reinforce principles that are taught in lecture. Required for students in the Preventive Veterinary Program Graduate Group (PVM) and the Masters of Public Health Program (MPH).

**Prerequisite(s):** MPM 202; or consent of instructor, or equivalent.

**Learning Activities:** Lecture 3 hour(s), Laboratory 2 hour(s).

**Grade Mode:** Letter.

## MPM 204 – Medical Statistics III (4 units)

**Course Description:** Continuation of MPM 203. Selecting the best regression equation, conditional logistic regression, Poisson regression, survival analysis, analysis of time dependent variation and trends. Microcomputer applications in population medicine to reinforce principles that are taught in lecture.

**Learning Activities:** Lecture 3 hour(s), Laboratory 2 hour(s).

**Grade Mode:** Letter.

## MPM 205 – Principles of Epidemiology (4 units)

**Course Description:** Basic epidemiologic concepts and approaches to epidemiologic research, with examples from veterinary and human medicine, including outbreak investigation, infectious disease epidemiology, properties of tests, and an introduction to epidemiologic study design and surveillance.

**Prerequisite(s):** MPM 202; or consent of instructor; an introductory statistics course.

**Learning Activities:** Lecture 4 hour(s).

**Cross Listing:** EPI 205.

**Grade Mode:** Letter.

## MPM 206 – Epidemiologic Study Design (4 units)

**Course Description:** Builds on concepts presented in MPM 205. Concepts of epidemiologic study design (clinical trials, observational cohort studies, case control studies) introduced in MPM 205A are covered in more depth, using a problem-based format. Discussion of published epidemiologic studies.

**Prerequisite(s):** MPM 205; or consent of instructor.

**Learning Activities:** Lecture 30 hour(s), Discussion 9 hour(s), Laboratory 2 hour(s).

**Cross Listing:** EPI 206.

**Grade Mode:** Letter.

## MPM 207 – Applied Epidemiologic Problem Solving (1 unit)

**Course Description:** Integration of epidemiologic and statistical methodology in a problem-solving approach to contemporary animal population health issues. Data validation and manipulation.

**Learning Activities:** Discussion/Laboratory 2 hour(s).

**Grade Mode:** Letter.

## MPM 208 – Research Planning & Reporting I (2 units)

**Course Description:** Identify and implement research questions through hypothesis construction, articulation of aims, acquiring permits, working as a team, and all other techniques needed to develop a successful research program.

**Learning Activities:** Lecture/Discussion 2 hour(s).

**Enrollment Restriction(s):** MPVM standing or consent of instructor.

**Credit Limitation(s):** Not open for credit to students who have previously taken MPM 408B.

**Grade Mode:** Letter.

## MPM 209 – Research Planning & Reporting II (1 unit)

**Course Description:** Concepts and skills in effective scientific writing for publication in a peer-reviewed journal in animal health or biomedicine. Includes developing an argument, organizing and writing a manuscript, improving readability, and responding to peer review.

**Prerequisite(s):** MPM 208.

**Learning Activities:** Lecture/Discussion.

**Grade Mode:** Letter.

### **MPM 210 – Advanced Health Leadership (1.5 units)**

*Course Description:* Develop skills for effective scientific leadership, including: project management and collaboration, conflict resolution, communication with the public, dynamic distribution of health information, and evidence-based policy influence.

*Learning Activities:* Lecture, Discussion.

*Enrollment Restriction(s):* Limited to 35 students.

*Grade Mode:* Letter.

### **MPM 212 – Infectious Disease Epidemiology (3 units)**

*Course Description:* Basic and advanced level of conceptual and methodological foundations in infectious disease epidemiology necessary for veterinarians to develop and evaluate programs for detection, prevention, and control of infectious diseases in animal populations.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 2 hour(s), Discussion/Laboratory 1 hour(s).

*Cross Listing:* EPI 212.

*Grade Mode:* Letter.

### **MPM 298 – Directed Group Study (1-5 units)**

*Course Description:* Directed Group Study.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable 1-5 hour(s).

*Grade Mode:* S/U only.