

GLOBAL DISEASE BIOLOGY (GDB)

College of Agricultural & Environmental Sciences

GDB 090 – Introduction to Global Disease Biology (1 unit)

Course Description: Introduction to the Global Disease Biology major, research and internship opportunities, and potential career paths in human, animal, and plant health. Communication, ethics and the nature of science.

Prerequisite(s): Open to GDB majors only, or consent of instructor.

Learning Activities: Seminar 1 hour(s).

Enrollment Restriction(s): Open to Global Disease Biology majors only.

Grade Mode: Pass/No Pass only.

GDB 101 – Epidemiology (4 units)

Course Description: Principles and practice of epidemiology as applied to human, animal, and plant populations and the environment in which these populations co-exist. Quantitative analysis of both infectious and non-infectious disease. Inter-dependence between epidemiological analysis, decision-making and policy formulation will be highlighted.

Prerequisite(s): SAS 013; BIS 002A; BIS 002B; BIS 002C; ((STA 013 or STA 013Y) or (STA 100 or PLS 120)).

Learning Activities: Lecture 2 hour(s), Laboratory 3 hour(s), Discussion 1 hour(s).

Enrollment Restriction(s): Pass One restricted to Global Disease Biology majors only.

Grade Mode: Letter.

General Education: Science & Engineering (SE); Quantitative Literacy (QL).

GDB 102 – Disease Intervention & Policy (4 units)

This version has ended; see updated course, below.

Course Description: Examination of the prevention and treatment of diseases affecting humans, animals, and plants. Case studies illustrate the merits of a unified approach to promoting health at local, regional, and global scales.

Prerequisite(s): GDB 101; SAS 013; BIS 002A; BIS 002B; BIS 002C; PMI 129Y; VME 158.

Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s), Project.

Enrollment Restriction(s): Pass One restricted to Global Disease Biology majors only.

Grade Mode: Letter.

General Education: Science & Engineering (SE); Oral Skills (OL); Scientific Literacy (SL).

GDB 102 – Disease Intervention & Policy (4 units)

Course Description: Examination of the prevention and treatment of diseases affecting humans, animals, and plants. Case studies illustrate the merits of a unified approach to promoting health at local, regional, and global scales.

Prerequisite(s): GDB 101; SAS 013; (BIS 002A or (BIO 002, BIO 002L)), (BIS 002B or (BIO 001, BIO 001L)), (BIS 002C or BIO 003), PMI 129Y, VME 158.

Learning Activities: Lecture 3 hour(s), Discussion 1 hour(s), Project.

Enrollment Restriction(s): Pass One restricted to Global Disease Biology majors only.

Grade Mode: Letter.

General Education: Science & Engineering (SE); Oral Skills (OL); Scientific Literacy (SL).

This course version is effective from, and including: Spring Semester 2026.

GDB 103 – Microbiome of People, Animals, & Plants (3 units)

Course Description: Examination of the structure and function of microbial communities that live inside and on host organisms. Introduction to general concepts of the microbiome and microbiota, and their relationship to host health and disease.

Prerequisite(s): BIS 002A; BIS 002B; BIS 002C.

Learning Activities: Lecture 3 hour(s).

Grade Mode: Letter.

General Education: Science & Engineering (SE); Scientific Literacy (SL).

GDB 106 – Geographies of Health (4 units)

This version has ended; see updated course, below.

Course Description: Multiple geographies of health, including how both physical environmental systems and human social, economic & political systems impact health and disease. Global, comparative geographical approach emphasizes the benefits of integrated multidisciplinary analyses for planetary health success.

Learning Activities: Lecture/Discussion 3 hour(s), Project.

Grade Mode: Letter.

General Education: Arts & Humanities (AH) or Social Sciences (SS); World Cultures (WC).

GDB 106 – Medical Geography & One Health (4 units)

Course Description: Multiple geographies of health, including how both physical environmental systems and human social, economic & political systems impact health and disease. Global, comparative geographical approach emphasizes the benefits of integrated multidisciplinary analyses for planetary health success.

Learning Activities: Lecture/Discussion 3 hour(s), Project.

Grade Mode: Letter.

General Education: Arts & Humanities (AH) or Social Sciences (SS); World Cultures (WC).

This course version is effective from, and including: Spring Semester 2026.

GDB 187 – Global Disease Biology Seminar (3 units)

Course Description: Seminar leading to development of the research proposal and academic plan for the Global Disease Biology major.

Prerequisite(s): GDB 090; SAS 013.

Learning Activities: Seminar 2 hour(s), Discussion 1 hour(s).

Enrollment Restriction(s): Open to junior standing; Global Disease Biology majors.

Grade Mode: Letter.

GDB 189 – Global Disease Biology Senior Research (3 units)

Course Description: Capstone research experience for the Global Disease Biology major. Project may be experimental, library research, or some other creative activity.

Prerequisite(s): GDB 090; GDB 187; SAS 013.

Learning Activities: Independent Study 3 hour(s).

Enrollment Restriction(s): Restricted to senior standing; Global Disease Biology majors only.

Repeat Credit: May be repeated 1 time(s) for student research conducted over two quarters; second quarter used to finish writing the research paper.

Grade Mode: Pass/No Pass only.

GDB 189D – Global Disease Biology Research Discussion (1 unit)

Course Description: Prevent or solve problems during the students' research activity. Independent advising and assistance on research proposal.

Prerequisite(s): GDB 090; GDB 187; SAS 013; GDB 189; or consent of instructor.

Learning Activities: Discussion 1 hour(s).

Enrollment Restriction(s): Restricted to junior standing; Global Disease Biology majors only.

Grade Mode: Pass/No Pass only.