**Course Description:** A major current public health issue in the United States is the massive effort of Federal, State and Local Health Departments to prepare for possible bioterrorist events in the country. This professional class will focus on the practical application of the principles of epidemiology and public health in preparing for a smallpox bioterrorist event. The course will consider the epidemiology of smallpox; the possible magnitude of a bioterrorist attack using smallpox as an agent; public health methods of prevention and control of a smallpox outbreak; the approach to development of a plan for preparedness, response and recovery to a smallpox event, including a mass immunization program (triaging for inclusion, monitoring of adverse reactions, and contact tracing); surveillance for bioterrorism; elements of cooperation and strengthening of links required for preparedness and response within Local Health Departments, between Local, State and Federal Health Agencies, and between Local Health Departments and hospitals, healthworkers and law enforcement Agencies; and
the use of the Standardized Emergency Management System (SEMS) and Incident Command System (ICS). The principles and approaches covered in the professional class will prepare students to take a significant role in preparing for a smallpox or other bioterrorist event at a Local or State Health Department.

Objectives: 1) Provide basic information on the epidemiology of smallpox and its potential as a bioterrorist agent of mass casualty.
2) Provide a practical approach to the application of epidemiologic and public health principles to preparedness and response to a smallpox or other bioterrorist agent.
3) Provide an understanding of the complex interactions between and within local, state and federal agencies in preparing for, and responding to, a smallpox emergency.
4) Provide an understanding of the emergency management structures and functions, including the Standardized Emergency Management System (SEMS) and Incident Command System (ICS).

Grading and Course Requirements: There will be a midterm exam (50% of the final grade) and a paper (30% of the final grade) presented to the class (presentation 20% of the final grade).
Grading: Paper (30% of final grade)
Classroom presentation (20% of final grade)

Paper: Proposed topics to be submitted on 23 January.
Approximate length: 10 – 15 pages (double-spaced).
Due date: 6 March.
Graded on organization, original thought and interpretation on the subject and background materials, and overall quality of the paper.

Topics: Related to mitigation, preparedness, response or recovery to a smallpox or other bioterrorist (BT) event. Examples include:
- The argument for a major investment of resources in BT preparedness when investments in other public health activities are falling.
- The argument against a major investment of resources in BT preparedness when investments in other public health activities are falling.
- The argument that the magnitude of the impact of a bioterrorist attack with smallpox (or other BT agent) would not be great.
- The argument that the magnitude of the impact of a bioterrorist attack with smallpox (or other BT agent) would be great.
- The argument for offering smallpox vaccination to the general public prior to a smallpox emergency.
- The argument against offering smallpox vaccination to the general public prior to a smallpox emergency.
- The argument for primary emphasis on ring vaccination versus mass vaccination of the general public in a smallpox emergency.
- The argument for primary emphasis on mass vaccination of the general public versus ring vaccination in a smallpox emergency.
- The logistics of conducting a mass vaccination clinic for the general public in a smallpox emergency.
- The logistics of conducting ring vaccination in a smallpox emergency.
- Estimates of manpower requirements for mass vaccination of the population of Los Angeles County and possible sources for this required manpower.
- Important risk communication messages for the public for smallpox or other BT agent.
- The legal basis for a health officer to isolate, quarantine, or provide vaccination or chemoprophyaxis in a BT event.
- How to determine when a smallpox emergency is over.
Presentation: 10 minute classroom presentation
In-class presentations starting on 20 February.
Graded on organization, clarity of presentation, effective use of visual materials, and quality of a one-page handout with the major points.
Course Outline: 09 JAN: Introduction to the approach and methodology of the course.
Handout: (1) Epidemiology 406; and (2) Remarks by the President on Smallpox Vaccination.
The clinical, epidemiologic, and psychologic features of smallpox and its use as a bioterrorist agent.
A/V material: Death of a Disease.
Handouts: (1) CDC Overview of Smallpox, Clinical Presentations, and Medical Care of Smallpox Patients; and (2) CDC Smallpox Fact Sheet.

16 JAN: Applying epidemiology to estimate the possible magnitude of a bioterrorist attack using smallpox or other bioterrorist agent.
Handout: (1) Shining Light on “Dark Winter.”
The public health approach to plan for mitigation, preparedness, response and recovery phases of a smallpox emergency.
The Standardized Emergency Management System (SEMS) and Incident Command System (ICS) framework to address a smallpox or other bioterrorist event.
Handout: (1) SEMS Guidelines, Part 1, System Description, Section B, Field Response Level.

23 JAN: Discussion on papers and presentations.
Preparedness: Surveillance for bioterrorism, including traditional and innovative methods of surveillance, case definitions, notification procedures, and initial evaluation of a suspect case.

30 JAN: Surveillance for bioterrorism, including traditional and innovative methods of surveillance, case definitions, notification procedures, and initial evaluation of a suspect case.

06 FEB: Development of a mass immunization/prophylaxis program, including site selection, triaging for inclusion, follow-up of adverse reactions, contact tracing, and monitoring of ring and generalized mass vaccination effectiveness.

13 FEB: Midterm exam.
Open discussions on progress on group papers.
20 FEB: Links within a public health department (e.g., communicable disease control, public health laboratory, and public health investigators) that must work together and be strengthened in preparedness and response to a possible bioterrorist attack. Links between Local, State and Federal Health Departments and Agencies (e.g., Los Angeles County Department of Health Services, California Department of Health Services, and the US Centers for Disease Control and Prevention) that must work together and be strengthened in preparedness and response to a possible bioterrorist attack.

27 FEB: Links between Local Health Departments and hospitals, healthcare workers, and law enforcement agencies that must work together and be strengthened in preparedness and response to a possible bioterrorist attack.

06 MAR: The recovery phase of a smallpox plan, including criteria for declaring an end to a smallpox emergency.

13 MAR: Classroom presentation of group papers.