Spring, 2007

PHR 250

Foodborne Infections and Intoxications

Meets M & W, 6 to 8 p.m., 1010 Valley Hall

D. O. Cliver and others

This 4-unit elective course is intended for those who have had a first course in Food Microbiology (e.g., FST 104) or in Food Safety (e.g., VMD 413). Those who do not satisfy this should at least have had a first course in microbiology and be prepared to do additional reading. This second course offers a deeper understanding of the agents of foodborne disease, addresses the sources and fate of these agents as they may occur in foods, and then undertakes to apply this information in epidemiologic problem-solving. Possibilities for pre-harvest control will be considered for each agent, after which an overview will be presented. Guest instructors will be used to take advantage of special capabilities of the faculty.

Introduction			**Lecturer**
4/2 (A)	6	Classification of foodborne pathogens; sources of contamination	Cliver
	7	Incidence of foodborne diseases	Cliver
Infectious agents			
4/4 (B)	6	Bacteria: *Salmonella* spp	Tajkarimi
	7	Bacteria: *Campylobacter, Helicobacter, Arcobacter*	Jay-Russell
4/9 (C)	6	Bacteria: *Shigella* spp., *Yersinia enterocolitica*	Cliver
	7	Bacteria: *Clostridium perfringens*	Cliver
4/11 (D)	6	Bacteria: *Escherichia coli*	Jay-Russell
	7	Bacteria: *Listeria monocytogenes*	Jay-Russell
4/16 (E)	6	Bacteria: *Vibrio* spp.	Tajkarimi
	7	Bacteria: Other	Cliver
4/18 (F)	6	Viruses & prions	Cliver
	7	Parasites	Cliver
4/23 (G)	6	Protozoa	Cliver
Toxigenic agents			
(G)	7	Seafood toxins, etc.	Cliver
4/25 (H)	6	Bacteria: *Bacillus cereus*	Tajkarimi
	7	**First midterm** (Infectious agents; 30% of grade)	
4/30 (I)	6	Bacteria: *Clostridium botulinum*	Cliver
	7	Bacteria: *Staphylococcus aureus*	Cliver
5/2 (J)	6,7	Fungi and mycotoxins	Tajkarimi
5/7 (K)	6	Poisonous plants and animals, residues	Cliver

Food sanitation and preservation

(K)	7	Food preservation	Cliver
5/9 (L)	6	Microbiological testing of foods	Tajkarimi
	7	GMPs, SSOPs, SOPs, and HACCP	Tajkarimi
5/14(M)	6	Antimicrobial interventions	Cliver
	7	Predictive modeling	Cliver
5/16 (N)	6,7	Microbial ecology of foods	Cliver

Foodborne disease outbreaks

5/21 (O)	6	Outbreak investigation methods	Tajkarimi
	7	**Second midterm** (Toxigenic agents, sanitation, preservation; 30% of grade)	
5/23 (P)	6,7	Outbreak investigation problems	Tajkarimi
(5/28 Memorial Day)			
5/30 (Q)	6,7	Outbreak investigation problems	Tajkarimi, Cliver
6/4 (R)	6,7	Outbreak investigation problems	Tajkarimi, Cliver
6/6 (S)	6,7	Outbreak investigation problems	Tajkarimi, Cliver

Final exam—problem-solving take-home (open-book, **individual effort**; 40% of grade)

Required text: IAFP 1999. Procedures to Investigate Foodborne Illness, 5th ed.

Faculty:

Cliver, Dean O.	754-9120	docliver@ucdavis.edu	1019 Haring Hall
Jay-Russell, Michele		MJay@dhs.ca.gov	
Tajkarimi, Mehrdad		mtajkarimi@ucdavis.edu	

Course web site:
<http://www.vetmed.ucdavis.edu/PHR/PHR250/PHR250.html>