

## COURSE OUTLINE

ENVIRONMENTAL HEALTH  
Course Title

CPH 222  
Dept. & Course No.

### I. COURSE DESCRIPTION:

This course brings three environmental health matters into focus: the threat of vector-borne diseases; the proper management of waste disposal system (septic tanks); and the management of a food-borne outbreak.

### II. SEMESTER CREDITS: 3

III. CONTACT HOURS PER WEEK:    Lecture: 3    Lab: 0    Total: 3

### IV. PREREQUISITE: CPH 121

### V. STUDENT LEARNING OUTCOMES:

Upon completion of this course the student will be able, with 65% level of accuracy, to:

1. Define and describe vectors and their role in disease transmission.
2. Describe source reduction and source elimination in vector-borne diseases.
3. Describe the maintenance requirements and the current norms for septic tanks.

### VI. COURSE CONTENTS:

- A. Vectors defined, also as disease transmission factors
  1. Vectors, vehicles and fomites in disease transmission
  2. Patient diagnosis and care in vector-borne illnesses
  3. Most frequent means of transmission interruption
- B. Vector breeding and vector population control
  1. Breeding sites identification
  2. Vector population size determination
  3. Breeding sites control
  4. Live vector control
- C. Advantages of properly built septic tanks
  1. Contained usage of water
  2. Safe disposal of effluents
  3. Periodicity of tank pumping
  4. The Palau EQPB

4. Describe the main steps in the investigation of a food-borne outbreak.

5. Explain the most frequent contaminants and the role of environmental factors.

D. Steps in the investigation:

1. Confirmation of the outbreak and case definition
2. Specimen collection and laboratory testing
3. Most frequent patterns of contamination

E. Frequent food contaminants, the effect of time spans and the importance of packaging

1. Bacteria, toxins, viruses and chemicals as contaminants
2. Time and temperature between cooking and consumption
3. Packaging, storage and temperatures as contributing factors

#### VII. EQUIPMENT AND MATERIALS:

1. Projector
2. Routine classroom materials
3. 1 USB storage device (at least 1 GB)—student-furnished

#### VIII. TEXT:

Required Text: Instructor-made handout

#### IX. METHODS OF INSTRUCTION:

1. Problem – Based Learning [PBL]
2. Group work with tutor guidance
3. Self-learning from identified resources
4. Group reporting and consolidation of outcomes
5. Questions and Answers (Discussion)

#### X. METHOD OF EVALUATION:

1. Description	Points
a. Class participation & presentations	50%
b. Unit Tests/Quizzes	<u>50%</u>
Total	100%
2. Transmutation of percent to letter grade	
a. 90-100	A
b. 80-89	B
c. 70-79	C
d. 65-69	D
e. 0-64	F

**Palau Community College  
CPH 222 Environmental Health  
Course Learning Outcomes**

During the course experience, the *course learning outcomes* (CLOs) will be assessed through the use of signature assignments. A rating scale will be used to determine the students' proficiency level of each CLO using specifically aligned assignments. The numerical ratings of 4, 3, 2 and 1 are not intended to represent the traditional school grading system of A, B, C, D and F. The descriptions associated with each of the numbers focus on the level of student performance for each of the course learning outcomes listed below.

- Rating Scale:
4. Exceeds Expectations
  3. Meets Expectations
  2. Developing
  1. Below Expectations

**CLO#1: Students will be able to describe vectors and their role in disease transmission.**

4	Perform all of the following tasks accurately and completely: <ul style="list-style-type: none"> <li>• Describe the several vector types as relevant to disease in man.</li> <li>• Describe proper specimen collection and handling techniques, both for diagnostic purposes and for vector identification.</li> <li>• Explain advantages and challenges of different methods of interruption of transmission.</li> <li>• Describe patient diagnosis and care in vector control illness.</li> </ul>
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

**CLO#2: Students will be able to describe source reduction and source elimination in vector-borne diseases.**

4	Perform all of the following tasks accurately and completely: <ul style="list-style-type: none"> <li>• Describe the most frequent types of vector breeding sites.</li> <li>• Describe the main methods for the assessment of vector populations.</li> <li>• Explain the importance of the control of live vector populations.</li> <li>• Explain the relevance of vector breeding sites elimination.</li> </ul>
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

**CLO#3: Students will be able to define and describe the maintenance requirements and the current norms for septic tanks.**

4	Perform all of the following tasks accurately and completely <ul style="list-style-type: none"> <li>• Describe the impact of properly set septic tanks on water usage.</li> <li>• Explain the safety of discharged effluents from septic tanks.</li> <li>• Describe and discuss the need for periodic maintenance/pumping of septic tanks.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Explain the norms and rules set, in Palau, by the Environment Quality Protection Board.</li> </ul>
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

**CLO#4: Students will be able to describe the main steps in the investigation of a food-borne outbreak.**

4	Perform all of the following tasks accurately and completely: <ul style="list-style-type: none"> <li>• Explain the similarities and differences between different types of food-borne outbreaks.</li> <li>• Describe proper specimen collection and handling techniques.</li> <li>• Explain the role of the laboratory in outbreak investigations: diagnosis and case definitions.</li> <li>• Describe the most frequent pathways of food contamination.</li> </ul>
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.

**CLO#5: Students will be able to describe the most frequent contaminants and the role of environmental factors.**

4	Perform all of the following tasks accurately and completely: <ul style="list-style-type: none"> <li>• Describe the most frequent types of food contaminants as causes of outbreaks.</li> <li>• Explain the importance of the times between cooking and consumption of foods.</li> <li>• Explain the relevance of packaging, storage and temperatures as outbreak prevention factors.</li> </ul>
3	Perform the tasks mentioned above with mixed quality, but most are adequate and complete.
2	Perform the tasks mentioned above with mixed quality, but most are inadequate or incomplete.
1	Unable to perform the tasks mentioned above.