

Biology & Sociology of Human Disease Edmonds Community College (Lynnwood, WA)

Sociology 110 (Introduction to Sociology)
Biology 150 (Biology of Human Disease).

PREVIOUS LEARNING COMMUNITY NAMES:

“Sickness, Science & Society” (2005, 2006)
“KILLERS: Health Threats & Social Response” (2007)

TEAM MEMBERS AND THEIR DISCIPLINES:

<u>Name:</u>	<u>Discipline:</u>	<u>E-mail:</u>
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IMPLEMENTATION: Spring quarter 2008

PROJECT DESCRIPTION:

Our proposed project involves the enhancement of an existing non-math course, which is a learning community (a coordinated studies course) that includes Sociology 110 (Introduction to Sociology) and Biology 150 (Biology of Human Disease). The exercises that we develop in this project will also be used in stand-alone (non-coordinated studies) classes, including Biology 150, Sociology 110, Sociology 200, and in a course on medical sociology that will be developed next year. We used the time at the summer institute to develop quantitative epidemiological exercises mostly with our coordinated studies course in mind. The prerequisite for this course is placement into intermediate algebra.

OUTCOMES:

As a result of our MAC³ additions to our course student should be able to

1. calculate and interpret epidemiological rates (e.g. mortality rates) and distinguish between incidence and prevalence.
2. display epidemiological data in tables and graphs and interpret them.
3. effectively use quantitative reasoning (including math skills) to assess socially important health and illness issues, by
 - a. examining epidemiological data and forming hypotheses to explain these data.
 - b. articulating the type of data they would need to obtain in order to test their

- hypotheses and be able to predict what patterns in these data would support (and refute) these hypotheses.
- c. using quantitative reasoning to support particular solutions to public (and global) health issues.

DRAFTS OF ASSIGNMENTS:

See Mortality and Infant Mortality Worksheets and “Generating Hypotheses” exercise.

ASSESSMENTS:

Calculations of rates, reading/interpretation of tables and graphs, and practice with generating hypotheses will be integrated throughout the course. Please see the weekly topics below for some of the specific parts of the course that involve integration of these materials. We hope that repetition of activities will provide us with opportunities to assess student learning of quantitative/mathematical materials. We will also include calculations and interpretations into exams, and students are asked to show mastery of quantitative skills in their group presentation.

WEEKLY TOPICS FROM SYLLABUS:

<i>Week 1</i>	<i>Perspectives – Introduction to the Frameworks</i> Introduction to Biological Science Sociological Perspectives Graphing Exercise	
<i>Week 2</i>	<i>Underlying Structures/Scientific Method</i> Tissues and Organs Sociological Theories & Methods	Introduction of MAC ³ data & exercises
<i>Week 3</i>	<i>Disease, Culture, & Social Inequality</i> Mechanisms of Disease Culture & Social Inequality	
<i>Week 4</i>	<i>Biological & Social Health Care Systems</i> Lymphatic System & Immunity The Economy & Health Care Systems	
<i>Week 5</i>	<i>Breathing & Social Class</i> Social Class Respiratory System and TB	MAC ³ data & exercises
<i>Week 6</i>	<i>Water-Borne Disease, Social Class, & Global Stratification</i> Digestive System and WBD Social Class and Global Inequality	MAC ³ data & exercises
<i>Week 7</i>	<i>Global Issues, Race/Ethnicity, and Blood</i> Blood, Malaria and Sickle Cell Anemia Global Stratification / Race & Ethnicity	MAC ³ data & exercises

