

Argosy University
COURSE SYLLABUS

PH6012

Epidemiology and Risk Management

Faculty Information

Faculty Name:

Campus:

Contact Information:

Office Hours:

Short Faculty Bio:

Course description:

This course provides an overview of the principles and concepts in the science of epidemiology. Students learn the causal contributions, distributions, patterns, and determinants in disease, disabilities and death in human populations. They utilize the characteristics and dynamics of individual and community conditions to predict and analyze risk management and best practice solutions. Students learn to apply epidemiologic approaches to program evaluation and emergency preparedness.

Course Pre-requisites:

Required Textbook/Readings:

IMPORTANT: Effective Summer II (July 1, 2010): You are not required to purchase the textbook for this course. Your textbook will be available to you as an electronic book with your fully online or blended course on the eCollege platform.

Friis, R.H. (2009), *Epidemiology 101*. Jones & Bartlett. ISBN-13: 9780763754433

Additional Readings:

Lirn.net

Delva, J. et. al. (2005). The epidemiology of alcohol, marijuana, and cocaine use among Mexican American, Puerto Rican, Cuban American, and other Latin American eighth-grade students in the United States: 1991-2002. *American Journal of Public Health April; 95(4): 696-702* (Week 4)

PubMed Central:

Bryce, J. et. al. (2004). The multi-county evaluation of the integrated management of childhood illness strategy: lessons for the evaluation of public health interventions. *American Journal of Public Health, March; 94(3): 406-415* (Week 7)

Oppenheimer, G.M. (2005). Becoming the Framingham Study 1947-1950. *American Journal of Public Health April; 95(4): 602-610 (Week 3)*

Recommended Websites:

www.cdc.gov

MMWR Recommendations and Reports

CDC for You – Researchers- Top Resources

Course length: 7.5 Weeks

Contact Hours: 45 Hours

Credit Value: 3.0

Program Outcomes:

1. Health Policy Management

- a. Examine public health problems and develop proposed policies that illustrate pertinent legislative issues, advocacy opportunities, communication, media management and system issues to successfully pass, communicate, and implement the policy.
- b. Align policies that contribute and promote health and well being with local cultures and realities to guide effective practices that improve health status.

2. Healthcare and Organizational Management

- a. Assess organizational norms and values, and build coalitions and consensus around organizational vision, priorities, state and national health and wellness agendas with clear performance impacts.
- b. Manage and determine costs and implications for public health programs with un-met needs, and develop plans to meet customer needs and improve health outcomes.

3. Communication and Informatics

- a. Develop proposals for public health organizations to invest in and implement integrated information systems that collect, track, and share information across critical networks of providers and IT systems, to improve processes, quality of care, and service outcomes.
- b. Examine customer/community needs and apply a ‘systems approach’ in successfully addressing those needs by aligning the organization and customer needs with leading information technology and communicating the improvements to key stakeholders.

4. Systems Thinking

- a. Analyze the make-up of organizational systems and its characteristics, evaluating the impact of changes in the input, processes, and output on the health outcomes.
- b. Analyze the interrelations among public health systems and key stakeholders to influence the political, social, economic, and educational factors that impact public health systems.

5. Performance Improvement

- a. Propose a performance improvement system that includes assessment of the organizational capacity, culture, readiness, and planning to establish performance baseline, goals and performance management process for monitoring progress and continuous improvements.
- b. Integrate public health informatics, information systems and technology, and communication strategies in the design, implementation, evaluation, and replication of best practices for monitoring and improving overall practice, performance, and outcomes of the program/organization.

6. Interpersonal Effectiveness

- a. Examine the importance of interpersonal relationships with key stakeholders to establish, build, and sustain effective alliances to successfully address priority health problems in the community.

Course Objectives:

- Assess the impact of the historical roots of epidemiology thinking on the evolution of the scientific method.
- Evaluate the design of an epidemiologic investigation to reconcile scientific validity, best practices, and ethical sensitivity. PI2
- Analyze the evidence to recommend and justify appropriate interventions. HP1
- Differentiate the roles and relationships between epidemiology and policy cycles. IE1
- Diagram the steps from research, to risk assessment, to risk management and preparedness; and detail where and how epidemiology is applied in each step. IE1
- Apply the concepts of benefits, harms, and cost to a public health decision. C&I 2

Activities/Assignments/Assessments Table

	Topics	Resources
1	<p>Introduction to Epidemiology</p> <ul style="list-style-type: none"> • Epidemiology as an interdisciplinary science. • Important landmarks in the history of epidemiology. • Incidence and prevalence • mathematical terms used in epidemiology 	<p>Reading Resources/Digital Assets</p> <p>Chapters 1 & 2</p>
2	<p>Factors that affect the quality of Epidemiologic data</p> <ul style="list-style-type: none"> • Sources of epidemiologic data • Epidemiologic measures 	<p>Reading Resources/Digital Assets</p> <p>Chapter 3</p>
3	<p>Understanding Various Study Designs</p> <ul style="list-style-type: none"> • Epidemiologic research strategies • Case-control, ecologic, and cohort studies • uses of randomized controlled trials and quasi-experimental designs 	<p>Reading Resources/Digital Assets</p> <p>Chapters 5 & 6</p> <p>Oppenheimer (2005). Am J. Public Health. 2005 April; 95(4): 602-610</p>
4	<p>Descriptive Epidemiology</p> <ul style="list-style-type: none"> • Types of descriptive epidemiologic studies and their uses • Process of epidemiologic inference in the 	<p>Reading Resources/Digital Assets</p> <p>Chapter 4</p> <p>Delva (2005). Am J. Public Health. April; 95(4): 696-702</p> <p>LAS assessment 1 (20%): Utilize descriptive epidemiologic studies to examine the following health issues?</p>

	<p>context of descriptive epidemiology</p> <ul style="list-style-type: none"> • Person, place, and time variables & health outcomes 	<ul style="list-style-type: none"> • The obesity epidemic in the U.S.; • Increases in the prevalence of type 2 diabetes among adolescents; • Abuse of prescription pain pills.
5	<p>Epidemiology and Policy</p> <ul style="list-style-type: none"> • Definition of health policy • Risk assessment • decision analysis based on perceptions of risks and benefits 	<p>Reading Resources/Digital Assets</p> <p>Chapter 7</p>
6	<p>The Epidemiologic Triangle: Agent, Host, and Environment</p> <ul style="list-style-type: none"> • Epidemiology of infectious diseases • Procedures for investigating infectious disease outbreaks • Differences between direct and indirect transmission of disease agents 	<p>Reading Resources/Digital Assets</p> <p>Chapter 8</p>
7	<p>Epidemiologic Applications</p> <ul style="list-style-type: none"> • Social and Behavioral epidemiology • Application of epidemiologic methods to mental health • Trends in the rate of child and adolescent overweight 	<p>Reading Resources/Digital Assets</p> <p>Chapter 9 Bryce (2004) Am J. Public Health. March; 94(3): 406-415</p> <p>LAS Assignment 2 (30%) You are an epidemiologist, working for the New York State Department of Public Health back in September of 2001. The attack on the World Trade Center just happened and you are faced with recommending what needs to be done for your boss.</p>

	during the past 40 years	Design a detailed plan for what data you need to collect; the purpose for collecting the data; what type of studies that need to be designed; who you should collaborate with in collecting the data; and any and all barriers you may face in conducting the research. Be as thorough as possible and consider the full public health impact of the event and how your research will be applied.
8	<p>Epidemiologic Applications</p> <ul style="list-style-type: none"> • Molecular and genetic epidemiology • Application of epidemiology to environmental health • Applications of occupational epidemiology • Role for epidemiology in the primary prevention of unintentional injuries and violence • Forensic epidemiology 	<p>Reading Resources/Digital Assets</p> <p>Chapter 10</p>

Grading Criteria

Grading Scale

A	100 – 93 %
A-	92 – 90 %
B+	89 – 88 %
B	87 – 83 %
B-	82 – 80 %
C+	79 – 78 %
C	77 – 73 %
C-	72 – 70 %
F	69 and below

Grading requirements

<i>Attendance/participation</i>	<i>10%</i>
<i>Weekly Assignments</i>	<i>40%</i>
<i>LAS Assessment(s)</i>	<i>50%</i>
	<i>100%</i>

Library

All resources in Argosy University's online collection are available through the Internet. The campus librarian will provide students with links, user IDs, and passwords.

Library Resources: Argosy University's core online collection features nearly 21,000 full-text journals and 23,000 electronic books and other content covering all academic subject areas including Business & Economics, Career & General Education, Computers, Engineering & Applied Science, Humanities, Science, Medicine & Allied Health, and Social & Behavior Sciences. Many titles are directly accessible through the Online Public Access Catalog at <http://library.argosy.edu>. Detailed descriptions of online resources are located at <http://library.argosy.edu/libweb/resources/>

In addition to online resources, Argosy University's onsite collections contain a wealth of subject-specific research materials searchable in the Online Public Access Catalog. Catalog searching is easily limited to individual campus collections. Alternatively, students can search combined collections of all Argosy University Libraries. Students are encouraged to seek research and reference assistance from campus librarians.

Information Literacy: Argosy University's Information Literacy Tutorial was developed to teach students fundamental and transferable research skills. The tutorial consists of five modules where students learn to select sources appropriate for academic-level research, search periodical indexes and search engines, and evaluate and cite information. In the tutorial, students study concepts and practice them through interactions. At the conclusion of each module, they can test their comprehension and receive immediate feedback. Each module takes less than 20 minutes to complete. Please view the tutorial at <http://library.argosy.edu/infolit/>

Academic Policies

Academic Dishonesty/Plagiarism: In an effort to foster a spirit of honesty and integrity during the learning process, Argosy University requires that the submission of all course assignments represent the original work produced by that student. All sources must be documented through normal scholarly references/citations and all work must be submitted using the current edition of the *Publication Manual of the American Psychological Association*. Students are encouraged to purchase this manual and become familiar with its content as well as consult the Argosy University catalog for further information regarding academic dishonesty and plagiarism.

Scholarly writing: The faculty at Argosy University is dedicated to providing a learning environment that supports scholarly and ethical writing, free from academic dishonesty and plagiarism. This includes the proper and appropriate referencing of all sources. You may be asked to submit your course assignments through "Turnitin," (www.turnitin.com), an online resource established to help educators develop writing/research skills and detect potential cases of academic dishonesty. Turnitin compares submitted papers to billions of pages of content and provides a comparison

report to your instructor. This comparison detects papers that share common information and duplicative language.

Americans with Disabilities Act Policy

It is the policy of Argosy University to make reasonable accommodations for qualified students with disabilities, in accordance with the Americans with Disabilities Act (ADA). If a student with disabilities needs accommodations, the student must notify the Director of Student Services. Procedures for documenting student disability and the development of reasonable accommodations will be provided to the student upon request.

Students will be notified by the Director of Student Services when each request for accommodation is approved or denied in writing via a designated form. To receive accommodation in class, it is the student's responsibility to present the form (at his or her discretion) to the instructor. In an effort to protect student privacy, the Department of Student Services will not discuss the accommodation needs of any student with instructors. Faculty may not make accommodations for individuals who have not been approved in this manner.

The Argosy University Statement Regarding Diversity

Argosy University prepares students to serve populations with diverse social, ethnic, economic, and educational experiences. Both the academic and training curricula are designed to provide an environment in which students can develop the skills and attitudes essential to working with people from a wide range of backgrounds.