EPIB 620 – Chronic Disease Epidemiology

Semester: Spring 2012
Classroom and Time: SPH 0308
1/31/12-5/15/12
Tu 4-6:45 pm
Instructor: Olivia Carter-Pokras, Ph.D.
Office: 2234G School of Public Health Building
Phone: 301-405-8037
Email: Opokras@umd.edu

Office Hours: By appointment

Course Pre-requisite: Pre-requisite for this course is EPIB610. Students must be enrolled in a graduate program at the University of Maryland College Park School of Public Health, or receive prior approval by the instructor in order to enroll in the course.

Required Texts and Other Readings:

Required Text:

Readings as assigned

Recommended:


Course Description:

Epidemiology is the study of the distribution and determinants of the varying rates of diseases, injuries, and other health states in human populations. As the fundamental science underlying public health practice, epidemiology provides the conceptual and practical tools necessary for the study of public health problems. This course is designed to provide an overview of the prevalence, incidence and risk factors for major chronic diseases that face the U.S. population and the population of other countries.
Methodologic issues in epidemiologic studies in general, and specific methodologies unique to certain chronic diseases, will be discussed.

Course Learning Objectives:
Upon completing this course, the student will be able to:

1. Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
2. Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
3. Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
4. Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
5. Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
6. Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
7. Design a small epidemiologic pilot study to address a chronic disease topic (Program Competency #3, #10, 11).
8. Gain confidence in communicating epidemiologic information to lay and professional audiences (Program Competency #9).

Program Competencies Addressed in this Course:
The following competencies for the MPH degree are addressed in this course:

1. Explain the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues.
2. Describe a public health problem in terms of magnitude, person, time and place.
3. Apply the basic terminology and definitions of epidemiology.
4. Identify key sources of data for epidemiological purposes.
5. Calculate basic epidemiology measures.
6. Identify the principles and limitations of public health screening programs.
7. Evaluate strengths and limitations of epidemiologic reports.
8. Draw appropriate inferences from epidemiologic data.
9. Communicate epidemiologic information to lay and professional audiences.
10. Design, analyze, and evaluate an epidemiologic study.
11. Design and evaluate interventions to reduce prevalence of major public health problems.

Course Requirements:
The class sessions will include lectures, discussions, and classroom exercises to review main concepts of chronic disease epidemiology. Lectures will not necessarily cover all materials included in the reading assignments. Students are expected to complete the assigned readings prior to the class and to be prepared to participate in discussions and exercises during the class. This includes class text reading and assigned journal articles.

Class Participation
This is a graduate level course, and students are expected to attend class regularly, participate in class discussions, complete assigned readings, and put in an average of 9 hours of work outside of class each week to master the material. Students are responsible for determining the most relevant information from each lecture and reading. To help identify the key concepts, students may be asked to compose
two questions about the day’s lesson at the end of each class. Students will present their questions at the beginning of the following class to initiate discussion and confirm the previous lecture’s essential information. Alternatively, a posed, content-based question will be provided by the instructor to highlight key points from the readings or lecture. As a courtesy to your instructor and classmates, please notify the instructor in advance if you are unable to attend class. **Students who miss class are responsible for obtaining notes and hand-outs from other students.**

**Article discussion leader**
Each student will individually summarize (no more than 15 minutes) and lead a discussion of a non-review epidemiologic article on a chronic disease topic that was **published during the past year**. Power point presentations are not required. Students should choose epidemiologic journal articles from scientific public health or medical journals. Examples of appropriate journals include: American Journal of Public Health, Annals of Epidemiology, American Journal of Epidemiology, Journal of American Medical Association, etc. A list of journals that publish epidemiologic journal articles that are available online has been posted on our library webpage: [http://www.lib.umd.edu/CHEM/EPIB_610.html](http://www.lib.umd.edu/CHEM/EPIB_610.html) The summary and discussion questions should support a critical review of the article and cover: 1) a brief overview of article; 2) background and literature review on the subject matter; 3) relevance to epidemiology (e.g., if nutritional epidemiology article, should describe how the article advanced the field of nutritional epidemiology); 4) description of methods, results and key conclusions; and 5) strengths and limitations of the study. Students must have their article approved by the course instructor **at least one week prior** to the presentation so that the articles can be posted for classmates to read.

**Healthy People 2020 Data Review**
Each student will select a chronic disease topic from the syllabus, and summarize and present data related to relevant Healthy People 2020 objectives. Each student will provide a **15-20 minute overview** of the status of selected Healthy People 2020 objectives related to a chronic disease topic from the syllabus using national and state data. Students must briefly describe the datasource, provide the question wording that the objectives are based on, and **discuss strengths and limitations** of the measures (e.g., reliability, validity). National and state data for their topic should cover a) trends during the past decade and b) current status. Students will use Healthy People 2010 objectives ([http://www.healthypeople.gov/2020/topicobjectives2020/default.aspx](http://www.healthypeople.gov/2020/topicobjectives2020/default.aspx)), national datasources identified for Healthy People 2020, DATA2010 ([http://wonder.cdc.gov/data2010/](http://wonder.cdc.gov/data2010/)), and Healthy Maryland ([http://fhaf.maryland.gov/ohpp/hip/](http://fhaf.maryland.gov/ohpp/hip/)) such as the BRFSS. Several national and state datasources can be accessed through links available here: [http://sph.umd.edu/epib/cultural_competency/DataAndStatistics.html](http://sph.umd.edu/epib/cultural_competency/DataAndStatistics.html)

**Format for Project Proposal**
Several organizations provide pre-doctoral support for students interested in chronic disease. These instructions are based on application instructions from several of them.

The proposal should be for a 1-2 year time period with a maximum annual amount of $25,000 per year. The proposal should be no more than 6 pages in Word. Use 12 point Times New Roman or 11-point Arial as the minimum font size for the text of the application. A 10-point Times New Roman or 9-point Arial font type may be used for figures, legends, and tables. Single-spaced text is acceptable, and space between paragraphs is recommended. The margins of your text should be at least one inch all around. Type the research plan specifically following the outline given below, in the same sequence. All items should be addressed. Indicate N/A or None if not applicable to this application.
1. Specific Aims
   Begin the Research Plan here by providing a clear, concise summary of the aims of the work proposed and the hypothesis or hypotheses to be tested. The proposed project should not just be a vehicle for a mechanistic collection of data, but rather should contain a credible plan for research as well as a means for training.

2. Background and Significance. Sketch briefly the background to the proposal. State concisely the relevance of the research to cardiovascular function or disease, stroke, or to related fundamental problems. Describe the importance of the research described in this application by relating the specific aims to broad, long-term objectives (All references cited here are to be included in Item 3 below.)

3. Research Design and Methods
   Provide an outline of:
   a) The research design and procedures to be used to accomplish the specific aims. The description of your project and methodology should be succinct and precise. It is not sufficient to state that standard methods will be used; you should explain specifically which methods you plan to use and under what conditions.
   b) A tentative sequence for the investigation.
   c) The statistical procedures by which the data will be analyzed.
   d) Discussion of potential experimental difficulties and alternative approaches to achieve the desired aims.

4. Ethical Aspects of Proposed Research
   If the research involves human subjects, biohazards, or animals, explain the decision governing these choices. Describe any special consideration you have given to all ethical issues involved in your proposed investigation (biohazards, human or animal subjects), identifying risks and management. Discuss the nature of the informed consent that will be obtained if the research involves human subjects. If the proposed project involves no ethical questions, indicate "4: NONE".

   Note: Except as provided below, if a proposed research project involves human subjects, the population sampled shall be inclusive of the general population, of relevance to the scientific question posed, without restriction in regard to gender, race, age, and socioeconomic status. Proposals that intentionally restrict the population sampled must include a compelling scientific rationale for such research design. Be sure to address this topic.

A two-page biographical sketch should be attached and should include education and training (degree, year, institution, field of study), positions (duration, title, institution) and honors, and publications (if any). You may use the NIH biographical sketch format.

Blackboard:
The syllabus, required journal articles, Powerpoint slides and other course materials will be posted on the Blackboard website for EPIB620: https://elms.umd.edu/webapps/portal/frameset.jsp Please remember to visit this website prior to each class.

Course Policies:

Email – The Official University Correspondence:
Verify your email address by going to www.my.umd.edu.
All enrolled students are provided access to the University’s email system and an email account. All official University email communication will be sent to this email address (or an alternate address if provided by the student). Email has been adopted as the primary means for sending official communications to students, so email must be checked on a regular basis. Academic advisors, faculty, and campus administrative offices use email to communicate important and time-sensitive notices.

Students are responsible for keeping their email address up to date or for redirecting or forwarding email to another address. Failure to check email, errors in forwarding email, and returned email (from “full mailbox” or “unknown user” errors for example), will not excuse a student from missing University announcement, messages, deadlines, etc. Email addresses can be quickly and easily updated at www.my.umd.edu or in-person at the Student Service Counter on the first floor of the Mitchell Building.

For technical support for University email: www.helpdesk.umd.edu or call 301-405-1400.

Absence Policy:
In accordance with University policy if you are absent for a single (1) lecture due to illness or some form of personal or family emergency, this absence will be considered “excused” and the instructor will accept a note from you attesting to the date of the illness/incident, along with an acknowledgement that the information is true. Whenever feasible, you should try to contact the instructor in advance.

Multiple or prolonged absences, and absences that prevent attendance at a major scheduled grading event (like an exam or test) will require written documentation from an appropriate health care provider/organization.

A link to pull information on the new policy covering absences from class can be found at http://www.president.umd.edu/policies/v100g.html

Late work and Missed Exams / Assignments:
Assignments are due at the beginning of the classes specified in the syllabus. Students may consult each other when completing assignments, but each student must turn in his/her own individual work. 10% will be deducted for each day the assignment is late unless arrangement have been made prior to class.

Religious Observances:
The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs; students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the student’s responsibility to inform the instructor in advance of any intended absences for religious observance.

Special Accommodations / Disability Support Services:
If you have a documented disability and wish to discuss academic accommodations for test taking or other needs, you will need documentation from Disability Support Service (301-314-7682). If you are ill or encountering personal difficulties, please let the instructor know as soon as possible. You can also contact Learning Assistance Services (301-314-7693) and/or the Counseling Center (301-314-7651) for assistance.
Academic Integrity:
The University's code of academic integrity is designed to ensure that the principle of academic honesty is upheld. Any of the following acts, when committed by a student, constitutes academic dishonesty:

- **CHEATING**: intentionally using or attempting to use unauthorized materials, information, or study aids in an academic exercise.
- **FABRICATION**: intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
- **FACILITATING ACADEMIC DISHONESTY**: intentionally or knowingly helping or attempting to help another to violate any provision of this code.
- **PLAGIARISM**: intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise.

For more information see: [http://www.shc.umd.edu/code.html](http://www.shc.umd.edu/code.html).

The Honor Pledge is a statement undergraduate and graduate students should be asked to write by hand and sign on examinations, papers, or other academic assignments. The Pledge reads:

*I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination.*

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit [http://www.shc.umd.edu](http://www.shc.umd.edu).

Copyright Protection for Class Materials
My lectures and course materials, including power point presentations, tests, outlines, and similar materials, are protected by copyright. In addition, persons who publicly distribute or display or help others publicly distribute or display copies or modified copies of an instructor’s course materials may be considered in violation of the University Code of Student Conduct, Part 9(k). You may take notes and make copies of course materials for your own use. You may not and may not allow others to reproduce or distribute lecture notes and course materials publicly whether or not a fee is charged without my express written consent. Similarly, you own copyright in any papers you write for this course and in your exam essays. If I am interested in posting your answers or papers on the course web site, I will ask for your written permission.

Inclement Weather / University Closings:
In the event that the University is closed for an emergency or extended period of time, the instructor will communicate to students regarding schedule adjustments, including rescheduling of examinations and assignments due to inclement weather and campus emergencies. Official closures and delays are announced on the campus website ([http://www.umd.edu](http://www.umd.edu)) and snow phone line (301-405-SNOW), as well as local radio and TV stations.

Course Evaluations
The University, the School of Public Health, and the Department of Epidemiology and Biostatistics are committed to the use of student course evaluations for improving the student experience, course and
curriculum delivery, and faculty instruction. Your evaluations help instructors improve their courses; help deans and department chairs decide on merit pay for faculty, renewal of contracts, and support tenure and promotion decisions; and help current and future students decide on classes. The system (www.CourseEvalUM.umd.edu) will open Tuesday, November 29th and close on Wednesday, December 14th for Fall 2011 courses. The system (www.CourseEvalUM.umd.edu) will open Tuesday, April 24th and close on Friday, May 11th for Spring 2012 courses.

Available Support Services
The University of Maryland Libraries have many resources that will help with the research for your EPIB 620 project. Required and recommended textbooks for EPIB620 have been placed on reserve in the McKeldin Library. A library webpage has been developed which provides guidance on finding information, data and statistics; epidemiologic journals available at the library; epidemiologic associations; how to read a scholarly article and getting help from a librarian: http://www.lib.umd.edu/CHEM/EPiB _620.html Examples of scientific journals available at the library that publish epidemiologic findings include the: American Journal of Public Health, Annals of Epidemiology, American Journal of Epidemiology, Journal of American Medical Association, etc.

Grading Procedures:
Students will be graded from successful completion of course assignments, class participation, and a final examination. Grades will be determined on a 1000-point scale by the following methods: Examinations-There will be 1 midterm exam and 1 in-class exam. Each exam will consist of short answer and essay questions and will cover material from class lectures and the assigned readings.

Points Assessment
250 Research Study Pilot Proposal using epidemiological methods to address a chronic disease-related issue. The pilot proposal must use a standard epidemiological study design (i.e., cross-sectional, cohort, case-control, clinical trial) and be designed to answer a relevant research question. The proposal should include well-formulated specific aims that are tied to a chronic disease prevention, treatment/intervention strategy, or observational investigation. Grading will be based on proposal content and classroom presentation (powerpoint presentation). Due Date: TBA

150 Midterm Exam. A midterm exam will cover course material from the first part of the course. The examination will be a combination of short-answer and essay questions.

200 Final examination. The final examination will cover course material covered after the midterm examination. The examination will be a combination of short-answer questions and essay questions.

150 Article discussion. Each student will provide a critical overview and lead a discussion of an article in the assigned reading. Due Date: TBA

150 Healthy People 2020 Data Review. Each student will provide a 15-20 minute overview of the status of Healthy People 2020 objectives related to a chronic disease topic from the syllabus using national data from DATA2010 and the state of Maryland. Students must briefly describe the datasource, provide the question wording that the objectives are based on, and discuss strengths and limitations of the measure(s). Due Date: TBA

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Student participation. Participation is judged by engagement in course activities, familiarity with assigned readings, and overall class participation. Students are expected to attend class regularly, participate in class discussions, and complete assigned readings. Students who miss class are responsible for obtaining notes and hand-outs from other students.

Number of Points | Grade
--- | ---
900 – 1000: | A
800 – 899: | B
700 – 799: | C
600 – 699: | D
< 600 | F

Course Outline / Course Calendar (Subject to Change):

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<th>Session</th>
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<th>Topic</th>
<th>Assignments</th>
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<td>Jan 31</td>
<td>Current issues and challenges in chronic disease control; Methods in chronic disease epidemiology</td>
<td>Readings</td>
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<tr>
<td>2</td>
<td>Feb 7</td>
<td>Role of infectious disease and genetics in chronic disease; Chronic Liver Disease; Intervention methods for chronic disease control</td>
<td>Readings</td>
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<td>3</td>
<td>Feb 14</td>
<td>Chronic disease surveillance</td>
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<td>Feb 21</td>
<td>Alzheimers Disease; Autism</td>
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<td>5</td>
<td>Feb 28</td>
<td>Diet and nutrition; Physical activity</td>
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<td>6</td>
<td>Mar 6</td>
<td>Tobacco use; Alcohol use</td>
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<td>7</td>
<td>Mar 13</td>
<td>High Blood Pressure; High Blood Cholesterol</td>
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<td>8</td>
<td>Mar 27</td>
<td>Midterm Exam</td>
<td>Midterm Exam</td>
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<td>9</td>
<td>Apr 3</td>
<td>Cardiovascular Disease</td>
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<td>10</td>
<td>Apr 10</td>
<td>Cancer; Brenda Edwards, NCI Guest Speaker (Invited)</td>
<td>Readings</td>
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<td>11</td>
<td>Apr 17</td>
<td>Chronic Respiratory Diseases; Sleep Apnea; Asthma</td>
<td>Readings Project Proposals 1-2</td>
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<td>12</td>
<td>Apr 24</td>
<td>Mental Disorders; Schizophrenia; Depression</td>
<td>Readings Project Proposals 3-4</td>
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<td>13</td>
<td>May 1</td>
<td>Obesity and overweight; Diabetes; Chronic Kidney Disease, Dr. Rashida Dorsey, ASPE Guest Lecturer (Invited);</td>
<td>Readings Project Proposals 5-6</td>
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<td>Arthritis and Other Musculoskeletal Diseases; Osteoporosis Course Review</td>
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<td>15</td>
<td>May 15</td>
<td>Final Exam</td>
<td>Final Exam</td>
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### Session Outline

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<th>Session 1</th>
<th>January 31</th>
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<tr>
<td><strong>Topic:</strong> Current issues and challenges in chronic disease control; Methods in chronic disease epidemiology</td>
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Learning Objectives for Session:
- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).

**Readings:** Chapters 1-2


**Recommended:**


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<thead>
<tr>
<th>Session 2</th>
<th>February 7</th>
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<tbody>
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<td><strong>Topic:</strong> Role of infectious disease and genetics in chronic disease; Chronic Liver Disease; Intervention methods for chronic disease control</td>
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Learning Objectives for Session
- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).

**Readings:**


Colditz GA, Taylor PR. Prevention trials: their place in how we understand the value of prevention strategies. 2010;31:105-120.

**Session 3**  
**Topic:** Chronic disease surveillance

**Learning Objectives for Session**
- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

**Reading:** Chapter 4


**Session 4**  
**Topic:** Alzheimers Disease; Autism

**Learning Objectives for Session**
- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
**Readings:**
Chapter 17


Media reports on autism article:
- [http://www.time.com/time/health/article/0,8599,1927824,00.html](http://www.time.com/time/health/article/0,8599,1927824,00.html)

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**Session 5**  
**February 28**

**Topic:** Diet and nutrition; Physical activity

**Learning Objectives for Session**
- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

**Readings:** Chapters 6, 7


Session 6 March 6

Topic: Tobacco use; Alcohol use

Learning Objectives for Session
  - Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
  - Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
  - Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
  - Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
  - Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
  - Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

Readings: Chapters 5, 8


Session 7  March 13

Topic: High Blood Pressure; High Blood Cholesterol

Learning Objectives for Session

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

Readings: Chapters 11, 12

McGill Jr HC; McMahan CA; Gidding SS. Preventing Heart Disease in the 21st Century. Implications of the Pathobiological Determinants of Atherosclerosis in Youth (PDAY) Study. Circulation 2008;117;1216-1227


Session 8  March 27

Topic: Midterm Exam

Learning Objectives for Session

Session 9  April 3

Topic: Cardiovascular Disease

Learning Objectives for Session

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

**Readings:** Chapter 13


**Recommended:**


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<tr>
<th><strong>Session 10</strong></th>
<th><strong>April 10</strong></th>
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<tr>
<td><strong>Topics:</strong> Cancer; Brenda Edwards, NCI Guest Speaker (Invited)</td>
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**Learning Objectives for Session**

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #6).
Competency #2).

- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).

**Readings:** Chapter 14


**Session 11 April 17**

**Topic: Chronic Respiratory Diseases; Sleep Apnea; Asthma; Project Proposals 1-2**

**Learning Objectives for Session**

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
- Design a small epidemiologic pilot study to address a chronic disease topic (Program Competency #3 and #10).
- Gain confidence in communicating epidemiologic information to lay and professional audiences (Program Competency #9).

**Readings:** Chapter 15


Clark NM. Community-Based approaches to controlling childhood asthma. Annu Rev Public Health.
Session 12  April 24

Topics: Mental Disorders; Schizophrenia; Depression; Project Proposals 3-4

Learning Objectives for Session

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
- Design a small epidemiologic pilot study to address a chronic disease topic (Program Competency #3 and #10).
- Gain confidence in communicating epidemiologic information to lay and professional audiences (Program Competency #9).

Readings: Chapter 16


Session 13  May 1

Topics: Obesity and overweight; Diabetes; Chronic Kidney Disease, Dr. Rashida Dorsey, ASPE Guest Lecturer (Invited); Project Proposals 5-6

Learning Objectives for Session

- Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
- Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
- Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
- Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
- Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
- Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
• Design a small epidemiologic pilot study to address a chronic disease topic (Program Competency #3 and #10).
• Gain confidence in communicating epidemiologic information to lay and professional audiences (Program Competency #9).

Readings: Chapters 9, 10, 20


Additional Readings to be Assigned

Session 14 May 8

Topics: Arthritis and Other Musculoskeletal Diseases; Osteoporosis; Course Review; Project Proposals 7-8

Learning Objectives for Session
• Describe the extent of risk of chronic disease to the population and its different subgroups and describe trends in developed and developing countries (Program Competency #2).
• Identify factors that are associated with increased risk of specific chronic diseases (Program Competency #2).
• Identify primary and secondary prevention strategies for these diseases (Program Competency #1).
• Describe the pathogenic sequence of events associated with development of the diseases (Program competency #2 and #3).
• Demonstrate use of appropriate epidemiologic analytic techniques (Program competency #5).
• Analyze strengths and weakness of the epidemiologic literature examining chronic disease (Program competency #6 and #7).
• Design a small epidemiologic pilot study to address a chronic disease topic (Program Competency #3 and #10).
• Gain confidence in communicating epidemiologic information to lay and professional audiences (Program Competency #9).

Readings: Chapter 18


Learning Objectives for Session

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Learning Objectives for Session

Additional Literature, Websites and Other Resources: