Instructor Information

Richard S. Hopkins, MD, MSPH
Adjunct Professor
Room 4224
Clinical and Translational Science Research Building
College of Public Health and Health Professions and College of Medicine
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hopkinsrs@ufl.edu

Office hours [One hour before and after class time and by appointment]
Contact Phone 850-544-7614

Course Overview
The purpose of this course is to prepare students to be able to design, evaluate, and operate public health surveillance systems, and to be able to read scientific reports based on surveillance data critically.

Prerequisites
Principles of Epidemiology (PHC 6001) or at least one semester of introductory graduate-level coursework in epidemiologic methods.

Note: this syllabus will likely be revised somewhat before the start of the course in January, 2016.

Course Objectives
Students who complete this course will be able to carry out the following functions at a journeyman level:
- Identify diseases or conditions appropriate to put under public health surveillance
- Identify purposes of such surveillance activities
- Design surveillance systems to meet those purposes
- Evaluate a surveillance system using the CDC Framework
- Choose the likely best source of data for surveillance of particular diseases or health conditions
- Identify target audiences for dissemination of surveillance data
- Analyze and display surveillance data for various audiences
- Develop and present policy recommendations based on analysis of surveillance data
- Develop questions for further examination using other methods, based on analysis of surveillance data
- Critique a scientific report based on surveillance data.

**Course meeting time:**

Wednesdays from 12:50 to 3:50 pm

**Text/Readings**

Case study materials will be handed out at the beginning of the class at which the case study will be used, and posted on the course web site as soon as the case study work in class has been completed.

Except as noted below, all required and recommended readings will be accessible at the course web site, either as web links or as downloadable files.

Several readings will be assigned from the following book:


Resource materials are accessible through web links or on the site. All will be assigned for reading during the course. They include:


CDC Chronic Disease Surveillance Indicators web site www.cdc.gov/nccdphp/CDI/overview.htm

Several pages on the Florida Department of Health, Bureau of Epidemiology, external web site:


Each week there will be one or more required readings that could include information from web-based documents, articles, or book chapters provided by the instructor, other students, or guest lecturers.

**Guest Lecturers**

Many weeks, one hour of class time will be devoted to a guest lecture on a relevant topic in public health surveillance. Some such guest lectures will occur by video teleconference. The content provided by guest lecturers is an integral part of the course.

**Homework**

See class project description. Almost every week one document that builds toward the final project will be required to be handed in, either on paper or as an electronic document. These documents will be graded and will contribute to the final project grade, while also helping the student and instructor assure that adequate progress is being made on the project. In many cases you will make a brief report in class on your progress, up through that assignment.
Class Participation

This class is generally highly interactive, with several case-studies involving small-group work and reporting back to the whole class. Participation in the case studies and class discussions is an important learning modality for the course material. Absence from class, inadequate preparation for class, or inadequate participation during class, will result in the student learning the material less well -- a waste of time for both students and instructor. Class attendance and participation will count toward the course grade. Use of internet-connected devices or telephones during class will not be permitted, unless required for one of the case-studies. Computers may be used for note-taking during class.

Presentations

Many of the intermediate products of your project work will be presented to the class, usually informally in less than 5 minutes. These presentations provide an opportunity for you to organize your thinking, and the discussion following each presentation will enable you to learn from other students’ experiences and their solutions to common problems. At the end of the course, you will make a formal 15-minute presentation on your completed project for the rest of the students and the instructor.

Course project.

Each student will carry out a course project. Work on the project will begin after the first class session, and proceed in well-defined stages throughout the term. Each week there will be material to be handed in that reflects your progress on your project. Each week, the instructor will read these materials and give you written guidance on your project by e-mail before the next class session. Some weeks, you will also make a brief class presentation.

- Brief class presentations will include aspects of
  - Choice of conditions to be put under public health surveillance
  - Case or indicator definition(s)
  - Design of a surveillance system
  - Data source(s) for the surveillance system
  - Evaluation of the chosen surveillance system
  - How data from the surveillance system will be presented for various audiences
  - Likely utility of surveillance system in support of public health and preventive interventions

- As a group we will pick an additional condition to work on collectively in the same way as your individual projects

- Term paper: a more in-depth assessment of surveillance options for a student-chosen disease or health condition, building on class presentations, addressing surveillance goals and the criteria in the CDC Framework for surveillance system evaluation. For some conditions, students will propose a surveillance system from scratch and do a formative evaluation; for others, students will review available literature and other information on existing systems and propose modifications.
## Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Lecturer</th>
<th>Notes</th>
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<tbody>
<tr>
<td></td>
<td>What is public health surveillance? – lecture</td>
<td></td>
<td>Class activity: case study on reasons to put a condition under public health surveillance. Assign project on design and evaluation of a surveillance system</td>
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<td></td>
<td>o Purposes of surveillance at national, state and local levels</td>
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<td>o When is surveillance research?</td>
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<td>o When does HIPAA Privacy Rule apply?</td>
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<td>o Relationship to public health program evaluation</td>
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<td>Types of public health interventions</td>
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<td>o Goals</td>
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<td>o Evaluation</td>
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<td></td>
<td>Project: Turn in choice of condition for surveillance project</td>
<td>Hopkins</td>
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<td></td>
<td>Class activity: case study on design of public health programs</td>
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<td>Readings:</td>
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<tr>
<td></td>
<td>May 19, 2011 <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6019a5.htm?s_cid=mm6019a5_w">http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6019a5.htm?s_cid=mm6019a5_w</a></td>
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<td>Ten Great Public Health Achievements, Worldwide, 2001-2010. MMWR June</td>
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<td>24, 2011.</td>
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<td>Week 3</td>
<td>Some public health programs and their surveillance needs</td>
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<td></td>
<td>o Tuberculosis control</td>
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<td>o Syphilis control</td>
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<td>o Family Planning</td>
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<td>o Cervical cancer prevention</td>
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<td>o Tobacco use prevention</td>
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<td></td>
<td>o General communicable disease control</td>
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Program logic models

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<thead>
<tr>
<th>Project: turn in initial case/indicator definition</th>
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Readings:

- State by state adult tobacco use data [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6325a3.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6325a3.htm)

General communicable disease

- CDC Annual Summary of Nationally Notifiable Diseases, 2012

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Ten Great Public Health Achievements of the 20th Century – pick two to read [http://www.cdc.gov/about/history/tengpha.htm](http://www.cdc.gov/about/history/tengpha.htm)


Hopkins; a local health department perspective on reportable disease surveillance (Nadia Kovacevich, Alachua County epi lead)
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Guests/Topics</th>
<th>Required Reading</th>
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</table>
| Week 4 | Data sources and system design             | Hopkins Guest lecture (invited): a public health program manager’s perspective on surveillance (Janet Hamilton, FL DOH) | Case study on data sources  
Case study on system design  
Project: turn in description of likely data sources  
| Week 5 | Case-based surveillance                     | Guest lectures: Leah Eisenstein (reportable disease data management) and David Atrubin (syndromic surveillance) | Case study using case-based surveillance  
Project: Student presentations on system design considerations  
| Week 7 | Syndromic surveillance                      | Hopkins Guest lecture on ESSENCE-FL (David Atrubin, FL)                        | Student presentations on purposes of their surveillance system  
Case study using syndromic surveillance  
Required reading: Centers for Disease Control and Prevention. Framework for evaluating public health surveillance systems for early detection of outbreaks; recommendations |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Instructor</th>
<th>Activities</th>
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<tbody>
<tr>
<td>8</td>
<td>Survey-based surveillance: Surveys in infectious disease outbreak context</td>
<td>Hopkins</td>
<td>Case study using survey-based surveillance</td>
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<td>BRFSS</td>
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<td>Project: Student presentations on preferred system design</td>
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<td>PRAMS</td>
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<td>Case study on surveillance system formative evaluation</td>
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<td>NHANES</td>
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<td>Project: student presentations on evaluation criteria for their system</td>
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<td>etc</td>
<td></td>
<td>Required reading for this class session: CDC: Updated Guidelines for Evaluating Public Health Surveillance Systems, Recommendations from the Guidelines Working Group. Accessible at <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4919a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4919a1.htm</a></td>
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<tr>
<td>9</td>
<td>Evaluating a surveillance system</td>
<td>Hopkins</td>
<td>Case study on surveillance data sources for infectious diseases</td>
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<td>10</td>
<td>Laboratory support for infectious disease surveillance</td>
<td>Hopkins</td>
<td>Case study on chronic disease surveillance</td>
</tr>
<tr>
<td></td>
<td>Data sources for infectious disease surveillance</td>
<td></td>
<td>Project: Return drafts with comments and suggestions for further direction</td>
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<td></td>
<td>Required review: CDC Chronic Disease Surveillance indicators web site <a href="http://www.cdc.gov/nccdphp/CDI/overview.htm">www.cdc.gov/nccdphp/CDI/overview.htm</a></td>
</tr>
<tr>
<td>11</td>
<td>Surveillance in the outbreak context</td>
<td>Hopkins</td>
<td>Project: Turn in first draft of surveillance evaluation document, using supplied template</td>
</tr>
<tr>
<td>12</td>
<td>Surveillance for cancer and other chronic diseases and risk factors – lecture</td>
<td>Hopkins</td>
<td>Case study on surveillance for infectious diseases</td>
</tr>
</tbody>
</table>
| Week 13 | Surveillance for injuries, poisonings and occupational diseases | Hopkins Guest lecture on poisoning surveillance – Jay Schauben invited | Case study on injury surveillance  
Turn in first draft of final presentation for review and comment  
Review document for states on how to prepare injury surveillance indicator data  
SENSOR program **http://www.cdc.gov/niosh/topics/pesticides/overview.html**  
Occupational surveillance indicators **http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5601a1.htm** |
|---|---|---|---|
| Week 14 | Surveillance for perinatal and childhood outcomes and conditions  
Birth defects registries  
PRAMS  
Birth and death certificates  
Program data | Hopkins Guest lecture on birth defects surveillance (Sharon Watkins invited) | Case study on MCH surveillance  
Review PRAMS web site **http://www.cdc.gov/prams/**  
March of Dimes interactive web site **http://www.marchofdimes.org/peristats/Peristats.aspx**  
| Week 15 | Surveillance for environmentally-induced diseases and conditions (both infectious and non-infectious disease issues) | Hopkins Guest lectures on Environmental Health Tracking Network (EHTN) | Case study on environmental health tracking  
Project: turn in second draft of final presentation for review and comment  
Florida EHTN portal **http://www.floridatracking.com/HealthTrackFL/default.aspx** |
Week 16

Summarizing and analyzing surveillance data, hypothesis generation

Hopkins

Case study on presentation of surveillance data

Final student project presentations

Evaluation/Grading
This course will be graded following the policies described here http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762#grades.

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Non-Punitive Grades and Symbols:
Zero Grade Points Not Counted in GPA

W = Withdrew
U = Unsatisfactory
H = Deferred grade assigned only in approved sequential courses or correspondence study
N* = No grade reported
I* = Incomplete

Failing Grades:
Zero Grade Points Counted in GPA

E = Failure
WF = Withdrew failing

The following table shows the various course requirements and their contribution to the overall course grade.
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Due date</th>
<th>% of final grade (must sum to 100%)</th>
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</thead>
<tbody>
<tr>
<td>Class participation</td>
<td>April 23</td>
<td>25%</td>
</tr>
<tr>
<td>Assignment # 1 for project</td>
<td>January 17</td>
<td>5%</td>
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<tr>
<td>Assignment # 2 for project</td>
<td>January 24</td>
<td>5%</td>
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<tr>
<td>Presentation on system design considerations</td>
<td>January 31</td>
<td>5%</td>
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<tr>
<td>Presentation on preferred system design</td>
<td>February 14</td>
<td>5%</td>
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<tr>
<td>Presentation on evaluation criteria for surveillance system</td>
<td>February 21</td>
<td>5%</td>
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<tr>
<td>First draft due of surveillance system evaluation</td>
<td>February 28</td>
<td>5%</td>
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<tr>
<td>Surveillance evaluation due</td>
<td>March 14</td>
<td>5%</td>
</tr>
<tr>
<td>Student presentation on visualization of surveillance data</td>
<td>March 21</td>
<td>5%</td>
</tr>
<tr>
<td>Presentation of design, evaluation, and uses of data from your surveillance system</td>
<td>April 16</td>
<td>10%</td>
</tr>
<tr>
<td>Paper due</td>
<td>April 23</td>
<td>25%</td>
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</tbody>
</table>

**Policy Related to Class Attendance**

Absences must be conveyed to the course instructor in advance whenever possible, or on the day of the absence for illness or emergency. Students are expected to attend and be prepared to participate in all class sessions. Personal issues with respect to class attendance or fulfillment of course requirements will be handled on an individual basis. According to the UF Graduate School Catalog (link below) “In general, acceptable reasons for absences from class include illness, serious family emergencies, special curricular requirements, military obligation, severe weather conditions, religious holidays, and participation in official University activities. Absences from class for court-imposed legal obligations (e.g., jury duty or subpoena) must be excused. Other reasons also may be approved.” For more information on UF’s attendance policy, visit [http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762#attendance](http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762#attendance)
Policy Related to Make-up Exams or Other Work
Make-up work will be allowed by the course instructor on an individual basis after an excused absence. Students should consult with the professor for new deadlines for assignments. For more information see http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762

Statement of University’s Honesty Policy
University of Florida Academic Honesty Statements
Students and faculty will adhere to the following policies for academic honesty and honor.

“I understand that the University of Florida expects its students to be honest in all their academic work. I agree and adhere to this commitment to academic honesty and understand that my failure to comply with this commitment may result in disciplinary action up to and including expulsion from the University.”

“All faculty, staff and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate.”

“We, the members of the University of Florida, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

For more information regarding UF’s policy on Academic Honesty, please visit http://gradcatalog.ufl.edu/content.php?catoid=2&navoid=762#Academic_Honesty

For details on how suspected honor code violations will be handled, please refer to http://regulations.ufl.edu/wp-content/uploads/2012/09/4042.pdf

Citations and Plagiarism
The two key purposes of citation are to: 1) give appropriate credit to the authors of information, research findings, and/or ideas (and avoid plagiarism), and 2) facilitate access by your readers to the sources you use in your research.

Quotations: When directly quoting an outside source, the borrowed text, regardless of the amount, must be surrounded by quotation marks or block quoted. Quoted text over two lines in length should be single-spaced and indented beyond the normal margins. Every quote must include a source—the author, title, volume, page numbers, etc.—whether an internal reference, footnote, or endnote is used in conjunction with a bibliography page.

Paraphrasing or Citing an Idea: When summarizing an outside source in your own words or citing another person’s ideas, quotation marks are not necessary, but the source must be included. This includes, but is not confined to, personal communications from other students, faculty
members, experts in the field, summarized ideas from published or unpublished resource, and primary methods derived from published or unpublished sources. Use the general concept of “when in doubt – cite.”

Plagiarism is a serious violation of the academic honesty policy of the College. If a student plagiarizes others’ material or ideas, UF Policies on Honesty and honor code violations, noted above, will be followed.

Generally speaking, the three keys of acceptable citation practice are: 1) thoroughness, 2) accuracy, and 3) consistency. In other words, be sure to fully cite all sources used (thoroughness), be accurate in the citation information provided, and be consistent in the citation style you adopt. All references should include the following elements: 1) last names along with first and middle initials; 2) full title of reference; 3) name of journal or book; 4) publication city, publisher, volume, and date; and 5) page numbers referenced. When citing information from the Internet, include the WWW address at the end, with the “access date” (i.e., when you obtained the information), just as you would list the document number and date for all public documents. When citing ideas or words from an individual that are not published, you can write “personal communication” along with the person’s name and date of communication.

**Statement Related to Accommodations for Students with Disabilities**
If you require classroom accommodation because of a disability, you must first register with the Dean of Students Office [http://www.dso.ufl.edu/](http://www.dso.ufl.edu/). The Dean of Students Office will provide documentation to you, which you then give to the instructor when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework.

**Counseling and Student Health**
Students may occasionally have personal issues that arise in the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the UF Counseling & Wellness Center, 352-392-1575. Visit their web site for more information: [http://www.counseling.ufl.edu/](http://www.counseling.ufl.edu/).

The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services, including primary care, women's health care, immunizations, mental health care, and pharmacy services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-1161 or check out the web site at: [www.health.ufl.edu/shcc](http://www.health.ufl.edu/shcc).

Crisis intervention is always available 24/7 from: Alachua County Crisis Center: (352) 264-6789 or [http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx](http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx)

Do not wait until you reach a crisis to come in and talk to me or to these providers. Many students have been helped through stressful situations impacting their academic performance. You are not alone, so do not be afraid to ask for assistance.