

**UNIVERSITY OF FLORIDA**  
**COLLEGE OF PUBLIC HEALTH AND HEALTH PROFESSIONS**  
**Department of Epidemiology and Biostatistics**

**PHC 6937**  
**Oral and Craniofacial Epidemiology**

**Course Syllabus**  
**Fall 2007**

**(3 credit hrs)**

**Thursdays 2–5 p.m.**  
**Room G111**

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**Guest Lecturer:**     **Robert H. Selwitz, DDS, MPH**  
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<b>Date</b>	<b>Week</b>	<b>Topics To Be Discussed</b>	<b>Discussion Leader</b>
08/23/2006	1	<b>Goals and Overview of Course Introduction to Oral Medicine &amp; Craniofacial Diseases Writing a Manuscript</b>	<b>Drs. Tomar /Baccaglini</b>
08/30/2006	2	<b>Introduction to Dental and Periodontal Diseases</b>	<b>Dr. Tomar</b>
09/06/2006	3	<b>Risk Factors for Oral and Craniofacial Diseases</b> <i>Preliminary Topic Selection Due</i>	<b>Dr. Tomar</b>
09/13/2006	4	<b>National Health Surveys (NHANES, NHIS)</b> <i>Final Topic Selection Due</i>	<b>Dr. Baccaglini</b>
09/20/2006	5	<b>Special Design &amp; Data Collection Issues</b> <i>List of Journal Articles Due (minimum 10 articles)</i>	<b>Dr. Tomar</b>
09/27/2006	6	<b>Special Statistical Issues, Sample Size Calculations &amp; Use of Directed Acyclic Graphs</b> <i>First Draft of Manuscript Due</i>	<b>Dr. Baccaglini</b>
10/04/2006	7	<b>Questionnaire Design &amp; Data Management Issues</b> <i>Selection of Journal for Submission Due</i>	<b>Dr. Baccaglini</b>
10/11/2006	8	<b>Genetic Epidemiology of Craniofacial Diseases*</b> <i>Critique of First Draft of Manuscript Due</i>	<b>Dr. Baccaglini</b>
10/18/2006	9	<b>Public Health Perspective on Prevention of Oral Diseases</b> <i>Second Draft of Manuscript Due (with Final Formatting)</i>	<b>Dr. Tomar</b>
10/25/2006	10	<b>MIDTERM</b>	<b>TBA</b>
11/01/2006	11	<b>County Dental Programs</b> <i>Critique of Second Draft of Manuscript Due</i>	<b>Dr. Selwitz</b>
11/08/2006	12	<b>Student Presentations &amp; Class Discussion</b> <i>Copyright Form Signed, Cover Letter to the Editor Due</i>	<b>Drs. Tomar/ Baccaglini</b>
11/15/2006	13	<b>Public Health Surveillance of Oral Diseases</b> <i>Final Manuscripts Due</i>	<b>Dr. Tomar</b>
11/22/2006	14	<b>Thanksgiving</b>	<b>No class</b>
11/29/2006	15	<b>QUIZ &amp; Course Evaluation</b> <i>Submit Manuscript to Journal*</i>	<b>Drs. Tomar/ Baccaglini</b>
12/06/2006	16	<b>Reading day</b>	<b>No class</b>

\* Bring a laptop with internet connection

## **COURSE DESCRIPTION**

This course is an introduction to epidemiology of oral and craniofacial diseases for students majoring in any aspect of the health sciences. In particular, the course will provide an overview of oral and craniofacial diseases and will discuss special issues related to the principles and methods of epidemiologic research in this field. In particular, the course will cover study design, data collection methodology, statistical issues, national health surveys, public health prevention and surveillance, and genetic epidemiology. Some lectures will include hands-on exercises. Students will prepare, critique, present and submit a manuscript for publication related to the epidemiology of oral and craniofacial diseases.

## **PRE-REQUISITES**

Students should have completed PHC 6001 and PHC 6050 prior to enrolling in this course. Students with equivalent training should contact the course director to request approval prior to enrollment. Completion of PHC 6000 and STA 6166 is recommended but not required.

## **COURSE OBJECTIVES**

The purpose of this course is to expose students to oral and craniofacial diseases and explain special epidemiologic issues encountered in research studies of craniofacial diseases. Students will critically read and evaluate the craniofacial diseases literature applying epidemiologic principles. Students will work closely with the instructors throughout the course to prepare a publishable manuscript related to the course material. After taking this course students will be able to identify potential problems and solutions encountered during the design and conduct of epidemiologic studies of craniofacial diseases.

Specifically, the student will:

- 1) Describe the epidemiology of common oral and craniofacial diseases and their association with systemic medical conditions.
- 2) Recognize confounders and risk factors that can affect the design and interpretation of craniofacial disease research. In particular, students will describe the association between oral disease and tobacco use.
- 3) Discuss the use of national health surveys as a potential source of data for epidemiologic studies of craniofacial diseases and the use of software programs for statistical analyses of complex national surveys (SAS, SUDAAN).
- 4) Recognize special study design considerations encountered during the conduct of craniofacial disease research, including principles and methodology used for data collection of oral health data. Students will criticize real-life data collection instruments.
- 5) Assess special statistical considerations encountered during the conduct of craniofacial disease research. Students will perform statistical power calculations.
- 6) Discuss the public health perspective on prevention of oral diseases. In particular, students will describe county dental programs and issues related to fluoridation, sealants and plaque control.
- 7) Describe public health surveillance of oral diseases.

- 8) Assess genetic epidemiologic principles and techniques that can be applied to craniofacial diseases. In particular, students will describe genetic databases (including the international HapMap project, OMIM and NCBI dbSNP), genetic principles (single nucleotide polymorphisms, Hardy-Weinberg equilibrium, linkage disequilibrium, heterozygosity, population stratification, etc), and statistical power considerations for association studies. Students will perform basic genetic analyses during hands-on classroom simulations.
- 9) Critically read and summarize the epidemiologic literature of oral and craniofacial diseases.

## **COURSE FORMAT**

The course will include lectures, group discussions, a midterm, a quiz, preparation of a manuscript for publication, critique of a manuscript, and informal student presentations.

## **COURSE ASSIGNMENTS**

Students are responsible for all course material, including reading all required materials prior to each class. Students will be required to attend the lectures, take a midterm and a quiz, search and read the assigned literature, prepare and submit a manuscript for publication, present the content of their manuscript to the class, and function as a journal peer reviewer by providing a written critique of a manuscript. There is no cumulative final exam.

**Midterm exam (40 points):** There will be a midterm on topics discussed in class and any reading assignments. *Students will be allowed to use a single sheet with their written class notes during the midterm.* Students are expected to take the midterm on the scheduled date and time. Make up midterms are not allowed except under very unusual and convincing circumstances. Students who fail to take the midterm on the scheduled date and time period without written permission of the instructor will receive a grade of zero on the midterm. This policy will be strictly enforced.

**Quiz (15 points):** There will be a final quiz on topics discussed in class and any reading assignments. *Students will be allowed to use a single sheet with their written class notes during the quiz.* The quiz will *not* be cumulative (it will only cover any material after the midterm) and may consist of a combination of short answers and/or exercises (for example, sample size calculation for a genetic study or other calculation). Students are expected to take the quiz on the scheduled date and time. Make up sessions follow the same rules as for the midterm above.

**Manuscript (40 points):** During this course students will prepare a manuscript for submission to a scientific journal. This step-by-step process offers a unique opportunity to interact with faculty and other peers and receive constructive feedback during the preparation of a manuscript. In past years, some students have successfully published their work in a peer-reviewed scientific journal at the end of this course. Students are expected to become first authors on the publication. There is no requirement that the course instructor be listed as a coauthor on any manuscripts produced in this course. The primary product will be a review paper in the area of oral and craniofacial epidemiology. In exceptional cases,

students with a strong statistical background and interest may produce analytical papers, subject to approval by the course director.

**Final Presentation (5 points):** Students will prepare an informal presentation of their final manuscript to the rest of the class (10-15 min), followed by an interactive class discussion (15 min). Students will choose the presentation format that they consider most effective. The objective of the student presentations is to obtain and/or provide constructive feedback from/to peers in a friendly environment. Critical thinking skills demonstrated during the presentation and the feedback provided to other students will count toward the presentation grade.

## GRADING

The responsibility for assigning grades rests exclusively with the course director. Course grades are reported to the Registrar of the School at the end of the course. Only the course director can change incomplete or conditional grades.

Students will receive points based on the timely completion of each assignment and the quality of the work. The maximum number of points they can be earned for each assignment is:

<b>Assignment</b>	<b>Points</b>
Midterm	40
Final Quiz	15
Topic selection for manuscript	5
List of articles	5
Drafts of manuscript	5
Critiques of manuscript	5
Presentation & discussion of manuscript	5
Final manuscript	20
<b>Total</b>	<b>100</b>

Grading for missed project deadlines, quizzes, exams or presentation will be adjusted as described in the “Missed Course Assignments Policy” section.

Each point earned is equivalent to 1 percentage point. Percentage points will be summed and converted into final letter grades for the course as described below.

**Grading System:** **A** = 90-100%, **B+** = 85-89.9%, **B** = 80-84.9%, **C+** = 75-79.9%, **C** = 70-74.9%, **D+** = 65-69.9%, **D** = 60-64.9%, **E** = Below 60%

## MISSED COURSE ASSIGNMENTS POLICY

Students are allowed to make up work **ONLY** as the result of illness or other unanticipated circumstances warranting a medical excuse and resulting in the student missing a quiz, presentation, or project deadline, consistent with College policy. Documentation from a health care provider is required. When excused, make-up quizzes and presentations will be arranged on a case-by-case basis.

Work missed for any other reason will result in a grade adjustment as show below:

**Grade adjustment (if unexcused):** For assignments not completed by the due date, the maximum number of points that can be earned will drop 10% for every day that the assignment is turned in late. For example, if the list of articles is submitted 3 day after the due date, the maximum possible number of points that a student can earn for that assignment will drop from 5 to 3.5. An assignment that is still incomplete 10 days after the due date will earn no points. For every unexcused absence from class, 5 points will be subtracted from the total points available (however, a total of three unexcused absences from class will result in course failure). An unexcused absence from a quiz or presentation will earn 0 points for that assignment. Adjustments can and will be combined. For example, a student with an unexcused absence from a quiz will earn 0 points for the quiz and will lose 5 points for missing a class.

## **ATTENDANCE POLICY AND CLASSROOM ETIQUETTE**

Class attendance is mandatory. Excused absences follow the criteria of the UFL Graduate Catalogue (e.g., illness, serious family emergency, military obligations, religious holidays), and should be communicated to the instructor prior to the missed class day when possible. UFL rules require attendance during the first two course sessions, and students also must attend all course sessions of student presentations for this class. **Missing more than three scheduled sessions without an excuse will result in a failure.** Regardless of attendance, students are responsible for all material presented in class and meeting the scheduled due dates for class assignments. Finally, students should read the assigned readings prior to the class meetings, and be prepared to discuss the material except for the first class session.

Please come to class on time and be prepared to stay until the time scheduled as the end of class. Pagers and cell phones should not be used in class. The use of cell phones, text messaging, and pagers is one of the most common complaints reported by students. Please turn them off. Or, if you expect urgent calls, set them to “vibrate.” Cell phones and pagers are not allowed during the in-class quizzes. Any student observed using a cell phone, pager, including text messaging during these times will receive a failing grade for that quiz. You may leave your pager with a faculty member during the quiz in case of emergency. The second most common complaint has been “side” conversation. Unless your conversation is a quick one, please consider that your conversation may interrupt the attention of someone seated near you. In-class discussion and questions are welcome.

**Academic Integrity:** Each student is bound by the academic honesty guidelines of the University and the student conduct code printed in the Student Guide and on the University website. The Honor Code states: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.” Cheating or plagiarism in any form is unacceptable and inexcusable behavior.

## **POLICY ON STYLE FOR CITATION AND PLAGIARISM**

The issue of citation and plagiarism may arise during the course. It is your responsibility to read the policy and ask questions if you do not understand the policy or have specific concerns or question. 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. In this class, you will be preparing a manuscript with appropriate citations.

**Quotations:** In general, direct quotation will not be a positive method of writing the literature critique. 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, he or she may receive an “E” in the course. The faculty member may also recommend further sanctions to the Dean. 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. Typical formats for citing references and books can be found in the *American Journal of Public Health*.

## **STUDENTS WITH DISABILITIES**

Students requiring accommodations must first register with the Dean of Students' Office. The Dean of Students' Office will provide documentation to the student who must then provide this documentation to the faculty member when requesting accommodation. The College is committed to providing reasonable accommodations to assist students in their coursework. We all learn differently; however, if you have experienced problems in university classes with writing, in-class exams, understanding or concentrating in class, please talk to me or access a learning or education testing resource at the University or in another professional setting.

## **READINGS**

Paper copies of required or recommended readings (or electronic versions) will be distributed or posted prior to each session. There is no required textbook.

The following book chapters, articles and websites are recommended for this course:

### **Craniofacial Diseases**

- U.S. Department of Health and Human Services (2000). The Craniofacial Complex. *In: Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, pp 23-34. <http://silk.nih.gov/public/hck1ocv.@www.surgeon.fullrpt.pdf>

### **Distribution of Oral Diseases and Conditions in the United States**

- Burt BA, Eklund SA. *Dentistry, Dental Practice, and the Community*. 6<sup>th</sup> Edition. St Louis, MO: Elsevier Saunders; 2005. pp 223–304.
- U.S. Department of Health and Human Services (2000). What is the Status of Oral Health in America? *In: Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, pp 35–93. <http://silk.nih.gov/public/hck1ocv.@www.surgeon.fullrpt.pdf>

### **Measuring Oral Disease**

- Burt BA, Eklund SA. *Dentistry, Dental Practice, and the Community*. 6<sup>th</sup> Edition. St Louis, MO: Elsevier Saunders; 2005. pp. 183–219.

### **Oral Health Surveillance**

- Beltran-Aguilar ED, Malvitz DM, Lockwood SA, Rozier RG, Tomar SL. Oral health surveillance: past, present, and future challenges. [J Public Health Dent](#) 2003;63(3):141-9.

### **Entrez Pubmed**

- <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed>

### **National Health Surveys**

- <http://www.cdc.gov/nchs/nhanes.htm>
- <http://www.cdc.gov/nchs/nhis.htm>

### **Sample Size**

- Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D., Hearst, N. & Newman, T. B. (2001) *Estimating Sample Size and Power: The Nitty-gritty*. In: *Designing Clinical Research*, Second edn, Lippincott Williams & Wilkins, Philadelphia, PA, pp. 65-91.

### **Directed Acyclic Graphs**

- Merchant AT, Pitiphat W. Directed acyclic graphs (DAGs): an aid to assess confounding in dental research. *Community Dent Oral Epidemiol*. 2002 Dec;30(6):399-404.

### **Questionnaire Design**

- Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D., Hearst, N. & Newman, T. B. (2001) *Designing Questionnaires and Data Collection Instruments*. In: *Designing Clinical Research*, Second edn, Lippincott Williams & Wilkins, Philadelphia, PA, pp. 231-245.

### **Data Management**

- Hulley, S. B., Cummings, S. R., Browner, W. S., Grady, D., Hearst, N. & Newman, T. B. (2001) *Data Management*. In: *Designing Clinical Research*, Second edn, Lippincott Williams & Wilkins, Philadelphia, PA, pp. 247-257.

## Genetic Epidemiology

- Rothman KJ, Greenland S. (1998) *Genetic Epidemiology*. In: Modern Epidemiology, second edn, Lipincott-Raven, Philadelphia, PA, pp 609-615.
- Little J, Bradley L, Bray MS, Clyne M, Dorman J, Ellsworth DL, Hanson J, Khoury M, Lau J, O'Brien TR, Rothman N, Stroup D, Taioli E, Thomas D, Vainio H, Wacholder S, Weinberg C. Reporting, appraising, and integrating data on genotype prevalence and gene-disease associations. *Am J Epidemiol*. 2002 Aug 15;156(4):300-10.
- <http://www.ncbi.nlm.nih.gov/SNP/index.html>
- <http://www.hapmap.org/>
- <http://www.ncbi.nlm.nih.gov/sites/entrez?db=OMIM>