Course Title: Reproductive and Perinatal Epidemiology

Course Number: EPID 0607

Course Pre- and Co-requisite(s): PHCO0502

Course Location: Room 334, School of Public Health Building, 683 Hoes Lane West, Piscataway -and- Room 1023, One Riverfront Plaza, Newark

Course Date & Time: Tuesday, 3:00pm to 5:00pm

Course Instructor: Emily Barrett, PhD
Associate Professor, Department of Biostatistics and Epidemiology, Rutgers
School of Public Health
emily.barrett@ehsi.rutgers.edu
848-445-0197 (office)
E-mail is preferred, particularly if you need an urgent response

Course Assistant: Ariana Nunez (an453@sph.rutgers.edu)

Office Hours: By appointment
Location: Environmental Occupational Health Sciences Institute (EOHSI); 170 Frelinghuysen Road, Room 326


Additional Readings will be assigned throughout the semester and will be provided on the course website.

Course Description: This course is a survey of major topics in reproductive and perinatal epidemiology from fertility to early childhood outcomes. This course focuses on methodological issues in studying reproductive and perinatal outcomes using epidemiologic study designs, while incorporating life course perspectives. The course also critically reviews the literature on major reproductive and perinatal outcomes and considers current debates in the literature.

Selected Concentration Competencies Addressed: Each Concentration identifies competencies for each degree offered. The competencies addressed in this course for the MPH for the Department of Epidemiology include:

- Critique epidemiologic literature, assess its strengths and weaknesses, and determine if conclusion(s) are supported.
- Formulate a specific hypothesis and determine an appropriate study design.
- Use epidemiologic techniques to quantitatively assess patterns and changes in disease occurrence.
Communicate and present study findings to professional audiences

Please visit the Concentration webpages on the School of Public Health’s website at sph.rutgers.edu for additional competencies addressed by this course for other degrees and concentrations.

Course Objectives: By the completion of this course, students will:
- Be familiar with the physiology of various reproductive and perinatal health outcomes
- Understand unique methodological issues in studying reproduction
- Recognize statistical models frequently used in reproductive and perinatal epidemiology
- Engage in debate on current issues in reproductive health
- Write and present a critical epidemiologic literature review

Course Canvas Site: The course Canvas site can be found after logging in to http://Canvas.rutgers.edu/. Please test your access to the site as soon as possible. Important course materials will be posted there including quizzes, readings, and other assignments. Make sure that Canvas sends you notifications to an e-mail address you check regularly. If you cannot access the site, let Dr. Barrett know as soon as possible. There are training materials available to help you with Canvas and can be accessed from your Canvas homepage or you can reach out to help@canvas.rutgers.edu for assistance. If you can upload a photo of yourself to Canvas, it is extremely helpful for learning names!

Course Requirements and Grading:

CLASS PARTICIPATION:
Given the format and content of the class, attendance and participation are essential. Students are expected to attend class prepared for the class session, actively participate, and positively contribute to group assignments and projects. You are unlikely to receive an “A” if you are not an active contributor in class. Both the quantity and quality of your participation are important.

- At the end of every class, you will evaluate your participation in Canvas using the “Exit Ticket” link. This will be the basis for your final participation grade. This is described in greater detail in the “Participation Rubric” document.
- Students will only be considered to have an excused absence if they contact Dr. Barrett before the beginning of the class that will be missed. When you miss class, you miss participation opportunities and cannot complete the Canvas “My participation” link (see “Participation Rubric”)
- Students who are more than 20 minutes late will not receive credit for attendance and cannot complete the Canvas “My participation” link (see “Participation Rubric”)

EXIT TICKET: At the end of each class, you’ll be given a brief question to answer on Canvas. It must be completed before you leave and will provide an opportunity to get feedback and gauge
your understanding of class material. It will also be used to take class attendance, so don't forget to do it!

**GRADING**

Your grade is based on multiple assignments and evaluations as described below. All assignments should be uploaded to Canvas no later than the start of class (3 pm) on the day they are due. Concepts and material from assignments will be reviewed in class on the due date, therefore late assignments will not be accepted. If you are having issues related to your computer/internet/Canvas, you may hand a hard copy of your assignment to Dr. Barrett by the start of class on the due date.

**15% Class contribution:** The main way to evaluate your participation is through your weekly online contribution log. After each class, you will track your contributions in the Canvas “My participation” link for that week. Please refer to the class contribution rubric for grade category descriptions. If you are absent from class, you cannot have a contribution for that day.

**15% Homework reading quizzes:** Short quizzes will be given each week through Canvas and must be completed prior to that week’s class. You will have 3 chances to submit your answers, so you can correct your errors (if any). However you will not receive information on which questions are wrong- you will need to figure that our yourself through careful reading.

**15% Out of class activities:** To supplement our two hours of in-class time each week, there will be an additional mandatory, out-of-class activity that should take you approximately 30 minutes to complete. The activity will vary from week to week but could include participating in a class discussion board, watching an assigned video or lecture, or evaluating a recent article. These activities will be announced in class and posted on Canvas. These activities are in addition to any homework or readings due that week.

**15% Reproductive and Perinatal Epidemiology in the news:** As you take this course, you’ll start to notice Reproductive and Perinatal Epidemiology stories in the popular press. With a partner, you will find a relevant news story from the past 2 years, then find the original scientific article it references. Together you will create 2-3 power point slides and a 2 page summary of the scientific article and how it was covered in the popular press. More detailed instructions will be provided.

**40% Critical literature review project:**

Over the course of the semester, each student will work on a critical literature review addressing an important topic in reproductive or perinatal epidemiology. As described below, these projects will include: (1) a proposal; (2) a presentation; and (3) a written final
paper. Each section should be: double-spaced with 1-inch margins and 11 point font. References must be formatted according to the American Journal of Epidemiology style. Sections are should be uploaded to Canvas before class on the day they are due and late papers will not be accepted. More details will be provided in class.

**Proposal (15% of project grade):** Students will submit a 1-page proposal specifying a specific exposure and outcome that will be reviewed.

**Presentation (35% of project grade):** Each student will deliver a 15-minute powerpoint presentation on their critical literature review topic, followed by 5 minutes of Q and A. The majority of research should be completed prior to the presentation as the goal of the presentation is for students to receive feedback from their peers to improve their final paper.

**Paper (50% of project grade):** This cumulative assignment is a critical review of the epidemiologic literature on the topic of the student’s choosing. Papers should be 8-12 pages in length, not including references, tables, or graphs. To help you pace yourself in completing the assignment and to give you the opportunity to get feedback, an optional first draft of the paper will be due earlier in the term.

**Grading Policy:**

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**Course Schedule:** This is a general schedule and is subject to change/updates as needed throughout the semester. Please attend class and check the Canvas site weekly for updates.

**1/22/19**

**Week 1: Introduction to reproductive and perinatal epidemiology**

**Background reading:**

- Louis and Platt, Chapter 1

**1/29/19**

**Week 2: Female reproductive health and fertility**

**Background reading:** Louis and Platt Chapters 2, 3, & 4.
Discussion reading: How does exercise impact women's fecundity?


2/5/19  
Week 3: Pregnancy Loss

Background reading:


Discussion reading: Does caffeine intake increase the risk of pregnancy loss?


2/12/19  
Week 4: Preterm birth (Zorimar Rivera-Nunez, PhD; Rutgers University, CINJ)

Background reading: Louis and Platt Chapters 8 and 9.

Discussion reading: Are there long-term impacts of mid-late preterm birth on children's neurodevelopment?


2/19/19  
Week 5: Disparities in reproductive and perinatal health

"Reproductive and Perinatal Epi in the news" assignment due

Background reading:
Discussion reading: Does psychosocial stress contribute to perinatal disparities?


2/26/19
Week 6: Birth defects (Elizabeth Marshall, PhD; Rutgers SPH)

Background reading: Louis and Platt Chapter 10.

Discussion reading: Is use of Assisted Reproductive Technologies (ART) associated with increased risk of birth defects?


3/5/19
Week 7: Environmental exposures during pregnancy

Background reading: None.

Discussion reading: Do environmental exposures contribute to neurodevelopmental disorders in children?


3/12/19
Week 8: Male reproductive health and fertility

Critical literature review 1 page proposal due

Background reading: None.
Discussion reading: *Is semen quality really declining?*


**3/19/19: Week 9: NO CLASS- SPRING BREAK**

**3/26/19**

**Week 10: Pregnancy complications (Shristi Rawal, PhD, Rutgers School of Health Professions)**

**Background reading:**
- Louis and Platt Chapter 6.

**Discussion reading:** *What is the role of the placenta in children’s neurodevelopment?*


**4/2/19**

**Week 11: Placental abruption and future cardiovascular disease risk (Cande Ananth, PhD, RWJ Hospital)**

**Background reading:**
- Louis and Platt Chapter 11.

**Discussion reading:** *Why is maternal mortality so high in the United States?*


**4/9/19**

**Week 12: Contraception (Guest speaker: Dr. Leslie Kantor, SPH)**

**First draft of critical literature review paper due (optional)**

**Discussion reading:** TBD
4/16/19
Week 13: Students’ choice
Readings TBD

4/23/19
Week 14: Student Presentations

No reading or homework assignment.

4/30/19
Week 15: Student Presentations

No reading or homework assignment.

5/7/18: NO CLASS- FINAL PAPERS DUE
Learning Management System: Canvas will be used extensively throughout the semester for course syllabus, assignments, announcements, communication and/or other course-related activities. It is the student’s responsibility to familiarize themselves with Canvas and check it regularly. If you have difficulties accessing Canvas, please inform the instructor and Canvas Support (help@canvas.rutgers.edu). Canvas is accessible at canvas.rutgers.edu.

School of Public Health Honor Code: The School of Public Health Honor Code is found in the School Catalog (sph.rutgers.edu/academics/catalog.html). Each student bears a fundamental responsibility for maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another’s work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the School community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Students with Disabilities: Rutgers University welcomes students with disabilities into all of the University’s educational programs. In order to receive consideration for reasonable accommodations, a student must Apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at ods.rutgers.edu. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations which should be shared with your instructors as early in your courses as possible.

Graduate Student Computer Policy: Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at: sph.rutgers.edu/student-life/computer-support.html.

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Policy Concerning Use of Turnitin: Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com (directly or via learning management system, i.e. Canvas) for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Students who do not agree should contact the course instructor immediately.

Withdrawal/Refund Schedule: Students who stop attending their course(s) without submitting a completed Add/Drop Course form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed Leave of Absence form from the School of Public Health’s Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at: sph.rutgers.edu/academics/school-calendar.html.