

Years offered: Every Year Alternate Years

10. Are students permitted to register for more than one section during a term? No Yes

May the courses be repeated for credit? No Yes Maximum Hours

11. Grading System*:
- | | |
|---|--|
| <p>Undergraduate</p> <ul style="list-style-type: none"> <input type="checkbox"/> Normal Grading (A-F, PS/NC, PR, I) <input type="checkbox"/> Passing Grade/No Credit (A-C, NC) <input type="checkbox"/> Credit/No Credit <input type="checkbox"/> Grade Only (A-F, PR, I) <input type="checkbox"/> Audit only <input type="checkbox"/> No Grade | <p>Graduate</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Normal Grading (A-F, PS/NC, PR, I) <input type="checkbox"/> Grade Only (A-F) <input type="checkbox"/> Satisfactory/Unsatisfactory (G only) <input type="checkbox"/> Audit only <input type="checkbox"/> No Grade |
|---|--|

12. Prerequisites (must be taken before): a. PUBH 601 PAR 11/10/11 b. - c. -

PIN (Permission From Instructor) PDP (Permission From Department) [Reset]

Co-requisites (must be taken together): a. - b. - c. -

13. If course is to replace an existing, course(s) will be deleted, and when should that deletion occur?

<u>Course to be removed from inventory</u>	<u>Final Term to be offered</u> (YYYYT, i.e. use 20064 for Fall'06)
a. -	-
b. -	-
c. -	-
d. -	-

14. Catalog description* (30 words Maximum)

Reproductive health issues from the pre-conception, prenatal, delivery, and postnatal periods and emphasizes health issues affecting women, men, and infants. A focus on current research, controversial issues, and methodological issues.

15. Attach an electronic copy of a complete outline of the major topics covered.

Syllabus: Attached [Browse...]

Additional Attachment 1: [Browse...]

Additional Attachment 2: [Browse...]

16. Where does this course fit in the University/College/Department curriculum? (Be specific by course level, if applicable). Indicate prospective demand.

An elective course in the MPH program. Reproductive Epidemiology is a standard course at MPH programs and schools of Public Health across the country. Few electives exist in our program so this will draw students. Epidemiology is a very popular major here.

17. If the proposed course is similar to another course in the College or University, please describe the difference and provide a rationale for the duplication. (If this course duplicates material covered in another course within your department or college or in another college, attach a letter of endorsement from that area's dean and department chairperson indicating their support. Clarify the manner in which this course will differ).

N/A

18.

If the course is intended to meet a University Undergraduate Core requirement, complete the following and submit a course syllabus using the template:

Please explain how this course fulfills the general education guidelines. (Guidelines are available in Faculty Senate Website)

Course Approval:

Department Curriculum Authority:

Sherry Muly

Date: 8 / 11 / 2011

Department Chairperson:

Sherry Muly

Date: 8 / 11 / 2011

College Curriculum Authority:

Sherry Muly

Date: 8 / 11 / 2011

College Dean:

[Signature]

Date: / / Year

**SIGN
HERE**

After college approval, submit the original signed form to the Faculty Senate (UH 3320) for undergraduate-level courses; for graduate-level courses submit the original signed form to the Graduate School (UH 3140). For undergraduate/graduate dual-level courses, submit the proposals to each office.

Faculty Senate Undergrad. Curriculum Comm.:

[Signature]

Date: / / Year

Faculty Senate Core Curriculum Comm.:

[Signature]

Date: / / Year

Graduate Council:

[Signature]

Date: 11 / 15 / 2011

Office of the Provost:

[Signature]

Date: / / Year

Registrar's Office:

[Signature]

Date: / / Year

Submit New Course Proposal

You will see a confirmation page after you press the "Submit" button. If you do not see the confirmation page, please call x 4320 or send an email to ProvostWebMaster.utoledo.edu. Thanks.

*This now needs to go
to Graduate Council
Curriculum Committee
to the attention of
Patricia Beloue*

**University of Toledo Health Science Campus
College of Medicine
Department of Public Health and Preventive Medicine**

**COURSE SYLLABUS
PUBH 616 Reproductive Epidemiology**

COORDINATOR AND INSTRUCTOR:

Brian Fink, PhD

Associate Professor, Department of Public Health and Preventive Medicine

Room 4223 Collier

Phone: (419) 383-4817, E-mail: brian.fink2@utoledo.edu

Course Location and Time:

Course Description

This course provides the analytical skills necessary to conduct epidemiological studies in reproductive health in human populations. Reproductive epidemiology covers broad reproductive health issues from the pre-conception, prenatal, delivery and post-natal periods and emphasizes health issues affecting women, men, and infants. Relevant methodological and programmatic issues will be presented with practical illustrations from domestic and international settings. You will be able to design a reproductive health epidemiology study, discuss relevant methodological issues in reproductive health epidemiology studies, and apply reproductive health data to improve reproductive programs and policy.

There will be a focus on current research, controversial issues, and methodological problems in the epidemiology of reproductive and perinatal health. Lectures and analyses of research papers present reproductive health issues such as conception and infertility, contraception and hormone supplementation, and reproductive health cancers as well as perinatal issues such as complications of pregnancy, infections in pregnancy, maternal mortality, adverse pregnancy outcomes, and birth defects.

There will be fantastic guest lecturers from our College of Medicine who will share their expertise and wealth of experience for this class. This will give a great insight into the mix of clinical practice and epidemiology in the real world.

Course Goals and Objectives

1. To know the definition of reproductive epidemiology and understand its scientific purposes in the real world.
2. To review the epidemiology of female and male reproduction, including contraception, reproductive associated neoplasias and STDs, and the epidemiology of pregnancy and perinatal outcomes.

3. To provide information on the sociodemographic, behavioral, and biologic risk factors for adverse outcomes, to review the biologic mechanisms for observed epidemiologic associations.
4. To apply epidemiologic findings to clinical and public health concerns in developed and developing countries.
5. To critically review scientific literature in the field of reproductive and perinatal epidemiology.
6. Describe the common pregnancy-induced disorders (e.g., anemia, pregnancy-induced hypertension, gestational diabetes mellitus) and their prevalence, risk factors, maternal and infant outcomes.
7. Describe the epidemiology of preterm birth and understand key differences in the conducting and interpretation of results of studies of preterm birth, intrauterine growth restriction and low birth weight.
8. Describe the epidemiology of stillbirth/fetal death, early neonatal death, infant mortality, perinatal mortality and maternal mortality.
9. To understand the influences of reproductive and perinatal health issues on policies related to health and health care.
10. To effectively lead class discussion sessions from assigned readings and other related class materials.
11. To develop appropriate, creative, and well-designed solutions for improving reproductive and perinatal health.
12. To effectively synthesize the latest research on a reproductive epidemiology issue of your choice and provide it in written/typed format for your final project.

Epidemiology Learning Objectives (Competencies) Met (Council on Education for Public Health)

1. Define and calculate measures of disease frequency and measures of association between risk factors and disease. Met by #2, #4, #5, #6, #7, and #8.
2. Describe the major epidemiologic research study designs and their advantages and limitations. Met by #2, #5, #10, and #11.
3. Describe the major sources of bias in epidemiologic research and the ways to evaluate and reduce bias. Met by #1, #4, #5, #6, #7, #8, #9, #10, #11, and #12
4. Apply criteria to support whether an association is causal. Met by all course goals and objectives above.
5. Understand the basic terms and methods used in outbreak investigation, infectious disease epidemiology, chronic disease epidemiology, and disease prevention trials, and evaluation of screening tests. Met by all course goals and objectives above.
6. Review the scientific literature with competence, synthesize findings across studies and make appropriate public health recommendations based on current knowledge. Met by objectives #2, #4, #5, #9, #10, #11 and #12.
7. Design an epidemiologic study to address a question of interest. Met by #1, #2, #3, #4, #5, #11, and #12
8. Interpret results of an epidemiologic study, including the relation to findings from other epidemiologic studies, potential biologic and/or social mechanisms.

- limitations of the study, and public health implications. Met by #2, #5, #10, 11, and #12
9. Write a clear description of the rationale, methods, results, and interpretation of an epidemiologic investigation. Met by #2, #3, #4, #5, #11, and #12
 10. Apply epidemiologic skills in a public health setting, specifically in the formulation or application of public health programs or policies. Met by #2, #3, #4, #5, #11, and #12

Core Outcome Competencies Met (Council on Education for Public Health)

1. Provide a fundamental understanding of public health, what it does and how it achieves its mission. Met by all course goals and objectives above.
2. Provide general knowledge, skill, and ability in areas that enable performance of one or more essential public health services. Met by all course goals and objectives above.
3. Develop skill in oral and written communications. Met by #4, 5, 6, 7, 8, 9, 10, 11, and 12.
4. Develop policy. Met by #4, 5, 7, 8, 9, 10, 11, and 12.
5. Promote cultural skills. Met by #3, 4, 6, 7, 8, 9, 10, 11, and 12.
6. Attain competence in basic public health sciences including epidemiology, environmental health, and behavioral science. Met by all course goals and objectives above.
7. Develop leadership skills and apply systems thinking. Met by #4, 5, 6, 7, 8, 9, 10, 11, and 12.
8. Provide technical knowledge, skills, and abilities needed for public health programs such as infectious disease control, disease prevention, occupational and environmental health. Met by #2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.

Required Textbook

1. Reproductive and Perinatal Epidemiology by Germaine Buck Lewis and Robert W. Platt. Oxford University Press 2011.
- 2.

There are also many articles and reports that are appropriate to each topic we will cover. Please read these in advance of class and be prepared to participate in class discussion. Since there are more resources out there, bring them to class and we can discuss these as well. Your active participation makes for a much richer learning experience that will allow everyone to truly learn about and understand the current and relevant reproductive health issues.

Library support is available at Mulford Library should you need any assistance with finding journals, books, or articles. You may also ask me for assistance with finding these resources.

Another useful website to search for journal articles is www.pubmed.gov. This website is highly recommended for your final paper due on _____. If you are not familiar with the site or with how to use it, do so ASAP.

Course Policies:

Attendance: Mandatory. If you must miss class, please let me know in advance (if possible) by phone (you may leave a message) or e-mail. Excused absences are permissible.

Grading: 92-100%: A; 90-91%: A-; 88-89%: B+; 82-87%: B; 80-81%: B-; 78-79: C+; 72-77%: C; 70-71%: C-; 69 and below: D or F.

Grading**1. Class Attendance (15%) and Participation (25%) → (40% of total grade!!!)**

- This course will be heavy in classroom discussion, perhaps including some scheduled debates of various topics we will cover. Therefore, you must come to class prepared by having read the materials and be ready to ask and answer questions from fellow students and myself. These issues are very current and relevant and should spark excellent conversation!
- Students will be evaluated subjectively based on their perceived level of preparation through participation in class and article discussion. As you can imagine, my evaluation is what counts, so everyone must participate. I will keep track. ☺ **Note: If you do not participate (e.g., do not talk, do not bring articles, spend time Instant Messaging and Internet browsing), you will not receive participation points. These are NOT given away.**
- This preparation includes the ability to ask questions and provide thoughts, opinions, and insights relevant to the class discussion, article discussion, and exercise work
- Attendance is **expected** and will count 15% of your grade. If you must miss class, please notify me before class, including your reason for not attending. Unexcused absences will result in losing percentage points from this portion of your grade.

1a. Current Events: Articles (newspaper, TV, online) regarding any issues in public health (pretty broad category!). Bring to class and we will discuss them prior to the beginning of lecture. These current events can be articles, reports, videos, even actual items (similar to Show and Tell from your pre-school days). This is part of your class participation and it is required for everyone to bring in at least one article for discussion during the semester. Sites such as www.google.com and www.youtube.com are fantastic resources for searches and you will be amazed at how much is available. Please e-mail me any electronic links through Blackboard so I can post these in the Current Events section on Blackboard for our in-class discussion. Failure to do so will result in a loss of percentage points.

2. Homework (30%)

The homework assignments will simply be the questions that pertain to your reading assignments. These assignments must be turned in before the start of class on the day that the relevant articles/reports will be discussed. I encourage you to work together with other students in this course on your homework and

assignments. Often, working together with another student on these assignments will help you both learn better.

3. Final Paper (30%)

The paper must be completed **individually** and is due by **December 12th at 5 PM**. Your final paper must be **at least 20 pages, double-spaced** (not including references, pictures, tables, or title page). Font should be 12-point and Times New Roman. Do not play around with the margins and narrow them because I will catch this and you will lose points. You may pick any reproductive epidemiology issue of your liking, though you must check with me first to see if it is acceptable. You may pick a topic or a portion of a topic we discuss in class as long as you do not duplicate what is covered. For example, you could choose to write your paper on birth outcomes among Ohio women who are victims of domestic violence and the impacts on our legal system and health care. Another example would be a paper comparing and contrasting the reasons why men and women may or may not receive reproductive health care in the United States. Just some ideas to get you thinking.

A key to this paper is to look at the issue from **multiple perspectives**. Thus, you must utilize **at least two perspectives (e.g., men and women, physicians and patients, insurers and policymakers)**. Perspective is essential to the course and this paper so view your topic in the same manner.

Elements of the Paper

1. **Background**: Every topic has to have a history, a background of information. Certainly some have longer backgrounds than others but the key is to accurately summarize the relevant reproductive epidemiology information so that it leads up to the heart of your discussion, the perspectives.
2. **Examples/Evidence**: While this can be touched upon a bit in the background, go through a chronology (again, can be annotated a bit if the evidence is so numerous) of how your topic has been dealt with historically and currently, if at all. What are we doing today with regard to this reproductive epidemiology issue? We can include many of those groups listed above (e.g. physicians, insurers, and policymakers) and others.
3. **Solutions and Conclusions**: Based on elements 1 and 2, what solutions do you suggest to improve the health and well-being of those affected by this reproductive epidemiology issue? How could these solutions be implemented to please all parties involved, if that is ever possible? You could view this as how could we please people more than upset them with regards to solutions as it difficult to fully satisfy everyone. This may help you think of more perspectives to view this issue from as often no issue can be solved, let alone addressed, by just one group.

Be creative with this paper and make sure you put the hard work in to this since this is your final project. This is subjective in terms of grading and since I am the grader,

you must put in the effort to make this paper strong. You must cite your references within the text and then at the end of your paper. Rather than put the author within your citations in the text of the paper, simply put a number within parentheses. Make sure that number matches with the full reference in your bibliography. **Do not just rely solely on websites and Google.** There are plenty of **journal articles that you can and should access** through www.pubmed.gov and other sites (the library staff can help you with this ... they are awesome with this!). Clearly, more recent topics will have more Internet sources but there are plenty of prior research articles likely associated with your topic choice to refer to. **A minimum of 25 sources is required.**

If you have any questions about the paper itself, please ask me in class or e-mail me so I can help you right away! ☺

Ethical Behavior and Practice: All students are expected to follow the requirements established for the course. In relation, students must read and understand the applicable expectations for ethical behavior and practice stated in the Student Handbook established by the MUO Graduate School and/or the Northwest Ohio Consortium for Public Health.

Reading Assignment Group Discussion Description

Discussion is vital to this course! These health issues are pretty current and should be able to spark some great discussion. ALL viewpoints are welcomed and should be expressed.

To keep everyone alert and make sure you are ready for class, I will randomly select the group leaders at the beginning of each class. Thus, be prepared to discuss and lead! Depending on the size of the course, you may be called to lead twice during the semester, so always be prepared. ☺ Plus, participation is required if you want to have any chance of earning an A.

Everyone should have responses prepared for the questions AND any other points, questions, etc. you have pertaining to the articles or lecture notes. These should also be brought up during the discussion.

Ideally, everyone should speak during the lecture portion and/or the discussion portion of class. Thus, if you are quiet during one class, I should hear from you in the next class. The homework questions can be used to guide the discussion but do not limit yourself to these. The lecture, current events/articles, and the readings for homework should provide you with some great insights, points, and questions to bring up during class. So please do so! Be thoughtful and be creative!

COURSE SCHEDULE
Reproductive Epidemiology PUBH 616 (Fall 2012)

CLASS	DATE	LECTURE TOPIC	INSTRUCTOR	DUE DATES
1		Physiology and Introduction to Reproductive Health		
2		Conception and Pregnancy Loss		Homework #1 DUE
3		Male and Female Infertility		Homework #2 DUE
4		Contraception Evaluation		Homework #3 DUE
5		Adverse Effects of Hormonal Contraception and Supplementation		Homework #4 DUE
6		Reproductive Tract Cancers		Homework #5 DUE
7		Labor and Delivery Complications		Homework #6 DUE
8		HIV and Sexually Transmitted Diseases and Pregnancy		Homework #7 DUE
9		Low birthweight, preterm birth, and intrauterine growth retardation: Part 1		Homework #8 DUE
10		Low birthweight, preterm birth, and intrauterine growth retardation: Part 2		Homework #9 DUE
11		Pregnancy Complications and Congenital Malformations		Homework #10 DUE
12		Neural Tube Defects		Homework #11 DUE
13		Environmental and Occupational Hazards and Birth Outcomes		Homework #12 DUE
14		Violence Against Women and Reproductive Outcomes		Homework #13 DUE
15		FINAL PAPER DUE		FINAL PAPER DUE

Course Calendar

Class 1: Physiology and Introduction to Reproductive Health

Reading: Chapter 1 from textbook: Introduction to reproductive and perinatal epidemiology

Nichols HB, Trentham-Dietz A, Hampton JM, Titus-Ernstoff L, Egan KM, Willett WC, Newcomb PA. From menarche to menopause: trends among US women born from 1912 to 1969. *American Journal of Epidemiology* 2006; 164(10):1003-1011.

Class 2: Conception and pregnancy loss

Homework #1 DUE

Reading: Chapter 2 from textbook: Sensitive Windows of Human Reproduction and Development

Gourounti K, Anagnostopoulos F, Vaslamatzis G. The Relation of Psychological Stress to Pregnancy Outcome Among Women Undergoing In-Vitro Fertilization and Intracytoplasmic Sperm Injection. *Women & Health* 2011; 51(4):321-339.

Class 3: Male and Female Infertility

Homework #2 DUE

Reading: Chapter 3 from textbook: Fecundity and Fertility

Anderson RA, Wallace WH. Fertility preservation in girls and young women. *Clinical Endocrinology* 2011.

Chung E, Brock GB. Cryptorchidism and its impact on male fertility: a state of the art review of current literature. *Canadian Urological Association Journal* 2011; 5(3):210-214.

Class 4: Contraception Evaluation

Homework #3 DUE

Reading:

Class 5: Adverse Effects of Hormonal Contraception and Supplementation

Homework #4 DUE

Reading:

Trenor CC, Chung RJ, Michelson AD, Neufeld EJ, Gordon CM, Laufer MR, Emans SJ. Hormonal Contraception and Thrombotic Risk: A Multidisciplinary Approach. *Pediatrics* 2011, 127(2):347-357.

Class 6: Reproductive Tract Cancers

Homework #5 DUE

Reading:

Class 7: Labor and Delivery Complications

Homework #6 DUE

Reading: Chapter 6 from textbook: Pregnancy Complications

Meier B, Georgouloupoulos A, Zajc M, Jaeger T, Zuchna C, Hasenoehrl G. Fetal outcome for infants in breech by method of delivery: experiences with a stand-by service system of senior obstetricians and women's choices of mode of delivery. *Journal of Perinatal Medicine* 2011, 39:385-390.

Palomaki O, Eerikainen H, Huhtala H, Kirkinen P. Prediction of successful labor induction by evaluation of maternal symptoms at an early stage of the misoprostol induction protocol. *Journal of Perinatal Medicine* 2011, 39:299-304.

Class 8: HIV and Sexually Transmitted Diseases and Pregnancy

Homework #7 DUE

Reading:

Chabot MJ, Lewis C, de Bocanegra HT, Darney P. Correlates of Receiving Reproductive Health Care Services Among U.S. Men Aged 15 to 44 Years. *American Journal of Men's Health* 2011, 5(4):358-366.

Edwards JL, Butler EK. The pathobiology of *Neisseria gonorrhoeae* lower female genital tract infection. *Cellular and Infection Microbiology* 2011, 2: 1-12.

Class 9: Low birthweight, preterm birth, and intrauterine growth retardation: Part One

Homework #8 DUE

Reading:

Class 10: Low birthweight, preterm birth, and intrauterine growth retardation: Part Two

Homework #9 DUE

Reading:

Editorial: Problems in prevention of preterm birth – regrettable contradictions. *Journal of Perinatal Medicine* 2011, 39:223-225.

Kovo M, Schreiber L, Ben-Haroush A, Asalee L, Seadia S, Golan A, Bar J. The placental factor in spontaneous preterm labor with and without premature rupture of membranes. *Journal of Perinatal Medicine* 2011, 39:423-429.

Class 11: Pregnancy Complications and Congenital Malformations

HOMEWORK #10 DUE

Reading: Chapter 10 from textbook: Birth Defects

Tegethoff M, Greene N, Olsen J, Schaffner E, Meinlschmidt G. Stress during Pregnancy and Offspring Pediatric Disease: A National Cohort Study. *Environmental Health Perspectives* 2011.

Class 12: Neural Tube Defects

Homework #11 DUE

Reading:

Naushad SM, Devi AR. Role of parental folate pathway single nucleotide polymorphisms in altering the susceptibility to neural tube defects in South India. *Journal of Perinatal Medicine* 2010, 38:63-69.

Class 13: Environmental and Occupational Hazards and Birth Outcomes

Homework #12 DUE

Reading:

Chalupka S, Chalupka AN. The Impact of Environmental and Occupational Exposures on Reproductive Health. *Journal of Obstetric, Gynecologic, and Neonatal Nursing* 2010, 39:84-102.

Class 14: Violence Against Women and Reproductive Outcomes

Homework #13 DUE

Reading:

Johri M, Morales RE, Boivin J, Samayoa BE, Hoch JS, Garzioso CF, et al. Increased risk of miscarriage among women experiencing physical or sexual intimate partner violence during pregnancy in Guatemala City, Guatemala: a cross-sectional study. *BMC Pregnancy and Childbirth* 2011.

Julin B, Wolk A. Dietary cadmium exposure and risk of epithelial ovarian cancer in a prospective cohort of Swedish women (short communication). *British Journal of Cancer* 2011, 1-4.

Urquia M, O'Campo PJ, Heaman MI, Janssen PA, Thiessen KR. Experiences of violence before and during pregnancy and adverse pregnancy outcomes: An analysis of the

Canadian Maternity Experiences Survey. BMC Pregnancy and Childbirth 2011, 11(42):1-9.

Class 15: FINAL PAPER DUE