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**University of Florida**  
**College of Public Health & Health Professions Syllabus**  
**Course Number: PHC 6937**  
**Maternal and Child Health Epidemiology (3 credits)**  
 Semester: Fall 2019  
 Delivery Format: On-Campus  
 Monday 8.30-11.30am  
 Room: HPNP 108 G

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**Instructor Name:** Deepthi S. Varma, PhD, MSW

Department of Epidemiology

Room Number: CTRB 4238

College of Public Health & Health Professions

College of Medicine

Clinical and Translational Research Building

2004 Mowry Road, PO Box 100231

University of Florida

**Phone Number:** 352 394 5941

**Email Address:** [dvarma@ufl.edu](mailto:dvarma@ufl.edu)

**Office Hours:** By appointment

**Teaching Assistants:** None

**Preferred Course Communications (e.g. email, office phone):** e mail

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**Pre requisites:** PHC 6001 Principles of Epidemiology in Public Health and PHC 6000 Epidemiology Methods I (or equivalent research methods coursework). Students with no prior instruction in epidemiology but with methodological coursework from another related discipline may be admitted with permission from the instructor.

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## **PURPOSE AND OUTCOME**

**Course Overview:** This is a 3-credit course offered on campus to graduate students on the epidemiology of maternal and child health. This course is designed to provide a graduate level understanding of how epidemiological principles can be applied to maternal and child mortality and morbidity.

### **Relation to Program Outcomes**

This course addresses the student learning outcomes in the PhD program, specifically to:

1. Display ethical behaviors, cultural sensitivity, teamwork, professional conduct and communication, and build academic skills through class exercises and applications;
2. Illustrate a thorough understanding of epidemiology concepts (maternal and child health epidemiology) through all assignments;
3. Design epidemiologic research studies and analyze data to answer health-related research questions that are currently relevant to the population including women and child health in the US and the globe through the assignment critiquing a current published study and through analysis of data relating to public health goals and policies.

### **Course Objectives and/or Goals**

1. Apply the various epidemiological concepts on issues related to maternal and child mortality and morbidity in the United States and globally
2. Identify sources of data available to understand maternal and child mortality and morbidity in the United States and globally
3. Examine the major epidemiologic and analytic issues specific to reproductive tract infections (RTIs) and its impact on maternal and child health.
4. Assess the influence of socio cultural norms and practices on maternal and child health

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5. Evaluate the major indicators of maternal and child morbidity/ mortality
6. Assess the various methodological issues specifically related to perinatal epidemiology
7. Explore the various national level and global policies and financing in the field of maternal and child health

### Instructional Methods

- 1) **Lectures:** There will be didactic lectures by the instructor and guests on concepts and issues related to Maternal and Child Health in the United States and globally.
- 2) **Readings and Resources:** Readings and resources will be posted in the course by the beginning of each week.
- 3) **Case Studies:** To better illustrate the concepts of Maternal and Child Health epidemiology, the Course instructor and guest speakers will present research studies led by them/ others in the United States or in other countries.
- 4) **Assessments:** Students will be graded on weekly homework, in-class presentation, discussions and participation in class, and attendance.

### What is expected of you?

You are expected to actively engage in the course throughout the semester. Your participation fosters a rich course experience for you and your peers that facilitate overall mastery of the course objectives.

## DESCRIPTION OF COURSE CONTENT

### Topical Outline/Course Schedule

Week	Topic(s)	Readings
1 26 <sup>th</sup> August	Introduction to the Course  History of maternal and child health field  Life course development model and its application in the study of MCH  Dr. Deepthi Varma, PhD	Russ SA, Larson K, Tullis E & Halfon N. (2014). A life course approach to health development: Implications for the MCH Research Agenda. Maternal and Child Health Journal, 18: 497-510.
2 2 <sup>nd</sup> September	<b>Holiday</b>	
3 9 <sup>th</sup> September	Epidemiology of maternal mortality & morbidity a) US b) Global trends (Unskilled delivery, sex-selective abortion, female genital mutilation, STIs, violence and sexual abuse, substance use, unsafe abortion, obstetric fistula)  Discussions based on the Ted talk.  Dr. Deepthi Varma, PhD	Ted Talk: Linda Robinson on Maternal Mortality in America and the crisis for rural women <a href="https://www.youtube.com/watch?v=2v5A3BxU4Uc">https://www.youtube.com/watch?v=2v5A3BxU4Uc</a>  Assignment 1 Due Examples using Life Course Model Presentation by students

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Week	Topic(s)	Readings
4 16 <sup>th</sup> September	Epidemiology of neonatal & under-five mortality and morbidity <ul style="list-style-type: none"> <li>a) US</li> <li>b) Global trends</li> </ul> Epidemiology and Prevention of Neural Tube Defects  Ten Great Public Health Achievements- Presentation & Discussion  Dr. Deepthi Varma, PhD Dr. Sonja Rasmussen MD - Confirmed	Ten Great Public health Achievements in the US (Vaccination & Maternal Health)  Ten Great Public health Achievements around the world (Vaccination & Maternal Health)
5 23 <sup>rd</sup> September	Determinants of maternal and child mortality <ul style="list-style-type: none"> <li>a) US</li> <li>b) Global</li> </ul> MDG 4 & 5: Progress made and Future Presentation and Discussion  Dr. Deepthi Varma, PhD	Millennium Development Goals 4 & 5 (MDG)  Assignment 2 Due
6 30 <sup>th</sup> September	Epidemiological evidence on the impact of environment on pregnancy, birth and child health outcomes          Dr. Hui Hu, PhD- Confirmed	Nieuwenhuijsen, M., Dadvand P, Grellier J, Martinez D, & Vrijheid M. (2013). Environmental risk factors of pregnancy outcomes: a summary of recent meta-analyses of epidemiological studies. <i>Environmental Health</i> , 12(1), 6.  Miranda ML, Maxson P, & Edwards S. (2009). Environmental contributions to disparities in pregnancy outcomes. <i>Epidemiologic Reviews</i> , mxp011.
7 7 <sup>th</sup> October	Disparities in Maternal and Child Health in the United States <ul style="list-style-type: none"> <li>a) Health status of various racial/ethnic groups</li> <li>b) Leading causes of death among children &amp; pregnant women</li> <li>c) Contributors to health disparity in MCH</li> </ul> Dr. Deepthi Varma, PhD	Reading materials will be provided  Assignment 3 Due
8 14 <sup>th</sup> October	Issues in maternal and child nutrition in the US and globally <ul style="list-style-type: none"> <li>a) Key nutritional needs of pregnant women and young children</li> <li>b) Determinants of nutritional status</li> <li>c) Nutrition &amp; health of women and children and its relation to economic development</li> </ul> Dr. Sarah McKune, PhD- To be confirmed Dr. Leslie Parker, PhD – To be confirmed	<u>Brief case study presentation &amp; discussions (case studies will be provided ahead of the class)</u>  Micronutrient Deficiency Intervention in Nepal Food Fortification Project in Kenya Tamil Nadu Nutrition Project in India

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Week	Topic(s)	Readings
9 21 <sup>st</sup> October	Impact of local norms and culture on maternal and child health <ul style="list-style-type: none"> <li>a) Health beliefs and practices</li> <li>b) Perception of diseases</li> <li>c) Diagnosis and treatment of diseases and use of health care services</li> </ul> Dr. Deepthi Varma, PhD	<u>Brief case study presentation and discussion (case studies will be provided ahead of the class)</u>  Birthing practices in Peru Polio vaccination in India Conditional Cash Transfers in India to improve Maternal and Child Health
10 28 <sup>th</sup> October	Reproductive Tract Infections and maternal mortality and morbidity <ul style="list-style-type: none"> <li>a) STIs</li> <li>b) Endogenous infections</li> <li>c) Iatrogenic infections</li> <li>d) Socio economic and cultural barriers to accessing treatment for RTIs</li> </ul> Dr. Erich Wyckoff, MD - Confirmed (10.30-11.30am)	Reading Materials will be provided
11 4 <sup>th</sup> November	Measurement of maternal and child mortality 1 <ul style="list-style-type: none"> <li>a) Sources of data: US &amp; Global</li> <li>b) Challenges in collecting accurate data – globally</li> <li>c) Indicators (Maternal Mortality rate, Infant Mortality rate, Maternal Mortality Ratio, Child Mortality rate, Under-five mortality rate etc.)</li> </ul> Discussions based on Ted talk. Dr. Kelly Gurka To be confirmed	<a href="https://www.ted.com/talks/hans_rosling_the_good_news_of_the_decade">https://www.ted.com/talks/hans_rosling_the_good_news_of_the_decade</a> Pedersen J, Liu J (2012) Child Mortality Estimation: Appropriate Time Periods for Child Mortality Estimates from Full Birth Histories. PLoS Med 9(8): e1001289. doi:10.1371/journal.pmed.1001289  Assignment 4 Due
12 11 <sup>th</sup> November	<b>Holiday</b>	
13 18 <sup>th</sup> November	Epidemiology of perinatal depression in the US and other countries  Dr. Jacqueline Hobbs, MD- To be confirmed	Gelaye B, Rondon M, Araya R, Williams MA. (2016). Epidemiology of maternal depression, risk factors, and child outcomes in low income and middle income countries. Lancet Psychiatry, 3 (10): 973-982. Doi:10.1016/S2215-0366 (16) 30284-X
14 25 <sup>th</sup> November	Global and the US policies in Maternal and Child Health <ul style="list-style-type: none"> <li>a) Title V and the Maternal and Child Health Block Grant - US</li> <li>b) Public-Private partnership in maternal and child health services &amp; research – US &amp; Global</li> </ul> Dr. Deepthi Varma, PhD	Shaw D, Guise J, Shah N, Gemzell-Danielsson K, Joseph KS, Levy B. et al. (2016). Drivers of maternity care in high-income countries: can health systems support woman-centered care? Lancet, 388, 2282-2295.  Assignment 5 Due

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Week	Topic(s)	Readings
15 2 <sup>nd</sup> December	Local and global challenges in the reduction and maternal and child mortality in low income countries  Discussions based on the article and Ted talk.  Dr. Deepthi Varma, PhD	Liberman A. (2016). Challenges for maternal health efforts, Lancet , 388 (17), 1146-1147.  Precision Public Health and its application in Maternal and Child Health Ted Talk: Sue Desmond-Hellman <a href="https://www.ted.com/talks/sue_desmond_hellmann_a_smarter_more_precise_way_to_think_about_public_health">https://www.ted.com/talks/sue_desmond_hellmann_a_smarter_more_precise_way_to_think_about_public_health</a>  Assignment 6 Due  Assignment 7 Due

### Course Materials and Technology

- Readings and resources will be posted on Canvas beginning of each week.

For technical support for this class, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

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## ACADEMIC REQUIREMENTS AND GRADING

### Grading

Grades are assigned based on the following criteria (see below). We will take every effort to grade all submitted assignments within seven days of the due date. A full explanation of content, discussion questions, assignments and other course components are completely described in the appropriate weekly pages of this syllabus.

All grades will be posted on the course website. If a student notices a discrepancy in any grade as it appears online, s/he must contact the course instructor within one week of the posting date in order to have the problem addressed. Students may not wait until the end of the semester to contest a grade.

### Grading

	Requirement (All assignments must be submitted through course website)	Submission Due date	Points or % of final grade (% must sum to 100%)
1	Chose any one maternal, or child health issue and explain it using the Life Course Model. (15mts presentation, in groups, maximum 10 slides, groups of 2 or 3 depending on class size). Slides must be submitted for grading. All members of the group will receive the same grade.	Week 2	8%
2	Critically evaluate and present the improvements in MCH mortality/ and or morbidity achieved as a result of MDGs or SDGs in any one low and Middle Income country. (15mts presentation, in groups, maximum 5 slides, groups of 2 or 3	Week 4	8%

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	depending on class size). Slides must be submitted for grading. All members of the group will receive the same grade.		
3	Article Review: Hystad, P., Davies, H. W., Frank, L., Van Loon, J., Gehring, U., Tamburic, L., & Brauer, M. (2014). Residential Greenness and Birth Outcomes: Evaluating the Influence of Spatially Correlated Built-Environment Factors. <i>Environmental Health Perspectives</i> , 122(10), 1095–1102. <a href="http://doi.org/10.1289/ehp.1308049">http://doi.org/10.1289/ehp.1308049</a> (Submit a 2-3 page critical review in groups). All members of the group will receive the same grade.	Week 6	8%
4	Social, economic and cultural determinants of maternal and child health: Presentation and Discussion (15mts presentation, in groups, maximum 10 slides, groups of 2 or 3 depending on class size). Slides must be submitted for grading. All members of the group will receive the same grade.	Week 8	8%
5	Select any LMIC and discuss the key challenges in addressing the maternal mortality and morbidity in that country (15mts presentation, in groups, maximum 10 slides, groups of 2 or 3 depending on class size). Slides must be submitted for grading. All members of the group will receive the same grade	Week 13	8%
6	Select any one national or global policy and its impact on maternal and child health in the US or in any country. (15mts presentation, in groups, maximum 10 slides, groups of 2 or 3 depending on class size). Slides must be submitted for grading. All members of the group will receive the same grade.	Week 15	10%
7	One individual paper to be prepared on a given topic based on what was learned in the previous classes during the semester. Topic will be selected based on a current public health issue of either state (Florida), national or global significance. Use the provided rubric while preparing the paper.  (Example: Impact of recent budget cut for Planned Parenthood and other groups that perform abortions on women's health in the United States)	Week 15	40%
8	Class Attendance & Participation Defined as 1) attendance at all class sessions, 2) meaningful contributions to all group activities, and 3) asking thoughtful and relevant questions in class.		10%

Slide presentations will be graded based on group participation in preparation and presentation, relevancy of the content, critical thinking, and presentation style.

Article review will be graded based on critical thinking, accuracy of information presented, and timely submission.

The individual paper will be graded based on a rubric provided at the beginning of the semester.

Tentative due dates for all grade components are listed on the course schedule above and additional information and specific instructions will be posted on the course website, under the *Assignments* tool. Please check Canvas regularly for updates to the syllabus that may affect due dates.

Point system used (i.e., how do course points translate into letter grades).

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<b>Points earned</b>	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	65-62	Below 60
<b>Letter Grade</b>	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. The GPA for graduate students must be 3.0. in all 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if a sufficient number of credits in courses numbered 5000 or higher have been earned with a B+ or higher.

<b>Letter Grade</b>	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
<b>Grade Points</b>	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at: <http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### Exam Policy

There are no exams for this course.

### Policy Related to Make up Assignments or Class Presentations

The instructor must be informed via email of any requests to make-up assignments or class presentations that were missed due to personal/ family emergencies or technical difficulties within 24 hours. Late submission of assignments without prior permission will result in deduction of 2% from the overall grade per each late submission. Approved makeup assignments should be submitted via email to the instructor.

### Policy Related to Required Class Attendance

All students are expected to attend all classes. Late arrival and/or early departures require prior permission from the instructor. Students are also expected to inform the instructor via email if they are going to be absent from the class any particular day.

**Please note all faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:**

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior

Electronics such as cell phones and other recording devices are not permitted during the class hours. Laptops are allowed for note taking, if needed.

Please be sure to print this syllabus and plan adequate time each week to view your lectures, read, complete your assignments. Please plan your time accordingly and ask questions if you are not clear on a lecture or assignment before they are due, versus after it is due. Please submit all assignments on time. Please verify that you submitted (1) the right assignment paper, and (2) that you submitted ANY attachment to your assignment.

### Communication Guidelines

**Emailing Instructor:** If you have questions, please feel free to email me through the *Mail* function of Canvas. Also, **remember to check the checkbox with the cc option that reads "send a copy of this message to recipients' email address (es);"** this will ensure a timely response to your question. Please contact the UF HelpDesk if you have access questions or technical issues with the course: (352) 392-HELP (4357) or [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu) or in the HUB, room 132. Please keep a copy of all assignments and work submitted.

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Canvas will issue an email receipt when assignments are submitted. Please check your submission to be sure it was properly submitted and that you attached the correct file. Print the syllabus for your reference. It is your responsibility to be aware of all assignments, due dates and guidelines. All assignments must be submitted through Turnitin.

### **Academic Integrity**

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

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

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

**“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”**

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>  
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

### **Online Faculty Course Evaluation Process**

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

### **Policy Related to Guests Attending Class**

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.php.ufl.edu/services/resourceguide/getstarted.htm>

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### **Inclusive Learning Environment**

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida’s Non-Discrimination Policy, which reads, “The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans’ Readjustment Assistance Act.” If you have questions or concerns



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about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: [www.multicultural.ufl.edu](http://www.multicultural.ufl.edu)

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## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities**

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

### **Counseling and Student Health**

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- 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. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:  
Alachua County Crisis Center  
(352) 264-6789  
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

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