

**University of Florida**  
**College of Public Health & Health Professions Syllabus**  
**PHC 6937 Maternal and Child Health Epidemiology (3 credit hours)**  
Fall: 2020  
Delivery Format: Online  
Course Website or E-Learning: TBD

Instructor Name: Deepthi S. Varma, PhD, MSW  
Room Number: CTRB 4238  
Phone Number: 352-294-5941  
Email Address: [dvarma@ufl.edu](mailto:dvarma@ufl.edu)  
Office Hours: By appointment using Zoom meeting links  
Teaching Assistants: None  
Preferred Course Communications (e.g. email, office phone): Email

**Prerequisites**

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.

**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
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	Date(s)	Topic(s)	Readings
1	08/31/ 2020	Brief History of MCH  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. <i>Maternal and Child Health Journal</i> , 18: 497-510.
2	09/09/ 2020	No Class Holiday	

Week	Date(s)	Topic(s)	Readings
3	09/14/ 2020	<p>Epidemiology of maternal mortality &amp; morbidity</p> <p>a) US b) Global trends</p> <p>(Unskilled delivery, sex-selective abortion, female genital mutilation, STIs, violence and sexual abuse, substance use, unsafe abortion, obstetric fistula)</p> <p>Discussions based on the Ted talk.</p> <p>Dr. Deepthi Varma, PhD</p>	<p>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></p> <p>Assignment 1 Due</p> <p>Examples using Life Course Model Presentation by students</p>
4	09/21/ 2020	<p>Epidemiology of neonatal &amp; under-five mortality and morbidity</p> <p>a) US b) Global trends</p> <p>Ten Great Public Health Achievements - Student Presentation &amp; Discussion</p> <p>Dr. Deepthi Varma, PhD</p>	<p>Ten Great Public Health Achievements in the US (Vaccination &amp; Maternal Health)</p> <p>Ten Great Public Health Achievements around the world (Vaccination &amp; Maternal Health)</p>

Week	Date(s)	Topic(s)	Readings
5	09/28/ 2020	Determinants of maternal and child mortality a) US b) Global  MDG 4 & 5: Progress made and Future Presentation and Discussion  Dr. Deepthi Varma, PhD	Millennium Development Goals 4 & 5 (MDG)  Assignment 2 Due
6	10/05/ 2020	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.

Week	Date(s)	Topic(s)	Readings
7	10/12/2020	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) Socioeconomic and cultural barriers to accessing treatment for RTIs</li> </ul> Dr. Erich Wyckoff, MD (Confirmed)	Reading materials will be provided  Assignment 3 Due

Week	Date(s)	Topic(s)	Readings
8	10/19/2020	<p>Issues in maternal and child nutrition in the US and globally</p> <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> <p>Dr. Rasmussen</p>	<p><u>Brief case study presentation &amp; discussions (case studies will be provided ahead of the class)</u></p> <p>Micronutrient Deficiency Intervention in Nepal  Food Fortification Project in Kenya  Tamil Nadu Nutrition Project in India</p> <p>Special guest lecture on “COVID-19 and its Effects on Pregnant Women and their Newborns” by Dr. Sonja Rasmussen, MD</p>

Week	Date(s)	Topic(s)	Readings
9	10/26/ 2020	Impact of local norms and culture on maternal and child health a) Health beliefs and practices b) Perception of diseases c) Diagnosis and treatment of diseases and use of health care services  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

Week	Date(s)	Topic(s)	Readings
10	11/02/2020	<p>Disparities in Maternal and Child Health in the United States</p> <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> <p>Dr. Deepthi Varma, PhD</p>	Reading Materials will be provided



11	11/09/ 2020	<p>Measurement of maternal and child mortality 1</p> <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> <p>Discussions based on Ted talk.</p>	<p><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</p> <p>Assignment 4 Due</p>
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We ek	Date(s)	Topic(s)	Readings
		Dr. Deepthi Varma, PhD	
12	11/16/2020	Epidemiology of perinatal depression in the US and other countries  Dr. Deepthi Varma, PhD	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. <i>Lancet Psychiatry</i> , 3 (10): 973-982. Doi:10.1016/S2215-0366 (16) 30284-X
13	11/23/2020	Methodological issues specific to perinatal epidemiology	Barnett AG. (2011). Time-Dependent Exposures and the Fixed-Cohort Bias. <i>Environmental Health Perspectives</i> , 119(10), a422–a423. <a href="http://doi.org/10.1289/ehp.1103885">http://doi.org/10.1289/ehp.1103885</a>  Hu H, Ha S, & Xu X. (2017). Ozone and hypertensive disorders of pregnancy in Florida: Identifying critical windows of exposure. <i>Environmental Research</i> , 153, 120-125.

Week	Date(s)	Topic(s)	Readings
14	11/30/2020	<p>Global and the US policies in Maternal and Child Health</p> <p>a) Title V and the Maternal and Child Health Block Grant - US</p> <p>b) Public - Private partnership in maternal and child health services &amp; research – US &amp; Global</p> <p>Dr. Deepthi Varma, PhD</p>	<p>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.</p> <p>Assignment 5 Due</p>

Week	Date(s)	Topic(s)	Readings
15	12/07/2020	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	Lieberman 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>

### ACADEMIC REQUIREMENTS AND GRADING

#### Assignments

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	Due date	Points or % of final grade (% must sum to 100%)
Create a 8-10 PowerPoint presentation on Life Course Model in MCH and submit it. Slides must be submitted for grading All students are expected to make a presentation of their slides in the class.	Week 3 (Group Presentations)	8%

<p>Critical evaluation of MCH Specific Millennium Development Goals (MDG) &amp; Sustainable Development Goals (SDG) (10mts presentation, in groups, maximum 5 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.</p>	<p>Week 5 (Group Presentations)</p>	<p>8%</p>
<p>Article Review: Hystad, P., Davies, H. W., Frank, L., Van Loon, J., Gehring, U., Tamburic, L., &amp; 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 students are expected to make a presentation of their slides in the class.</p>	<p>Week 7 (Group Presentations)</p>	<p>8%</p>
<p>Social, economic and cultural determinants of maternal and child health Presentation and Discussion (10mts presentation, maximum 10 slides) Slides must be submitted for grading All students are expected to make a presentation of their slides in the class.</p>	<p>Week 11 (Group Presentations)</p>	<p>8%</p>
<p>Select any one national or global policy and its impact on maternal and child health 10mts presentation, maximum 10 slides, Slides must be submitted for grading. All students are expected to make a presentation of their slides in the class.</p>	<p>Week 14 (Group Presentations)</p>	<p>8%</p>
<p>Select any LMIC and discuss the key challenges in addressing the maternal mortality and morbidity in that country (10mts presentation, maximum 10 slides, Slides must be submitted for grading. All students are expected to make a presentation of their slides in the class.</p>	<p>Week 15 (Group Presentations)</p>	<p>10%</p>
<p>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</p>	<p>Week 15 (Individual Submission)</p>	<p>40%</p>

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)		
Class Attendance & Participation Defined as 1) attendance at all class sessions, 2) meaningful contributions to in-class group discussions (as evaluated by the instructor), 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).

**Example:**

Points earned	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	Below 60
Letter Grade	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 based on 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if based on credits in courses numbered 5000 or higher that have been earned with a B+ or higher. In addition, the Bachelor of Health Science and Bachelor of Public Health Programs do not use C- grades.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	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

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/graduate/?catoid=10&navoid=2020#grades>

**Exam Policy**

There are no exams for this course.

### **Policy Related to Make up Exams or Other Work**

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.

Please note: Any requests for make-ups due to technical issues MUST be accompanied by the UF Computing help desk (<http://helpdesk.ufl.edu/>) correspondence. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

### **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>

Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>). Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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## **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, and 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.

Since “Professionalism” is a hallmark of patient and population care, and central to the mission of the College of Public Health and Health Professions, it will be assessed in this course. Student demeanor and observable behavior are central components to assessing one’s professionalism and will therefore need to be observed and occasionally recorded within this class. **To facilitate a proper evaluation of professionalism in online sessions, Zoom synchronous sessions may be audio-visually recorded and students will be asked to keep their cameras on during class. Failure to turn on the camera could result in the student not receiving a professionalism score.**

### **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 or in the HUB, room 132. Please keep a copy of all assignments and work submitted. 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 professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluer.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-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>

## **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.

Students in UF Health Sciences programs should be mindful that unique course accommodations may not be applicable in a clinical, fieldwork or practicum setting. Thus, planning a semester in advance with the DRC Health Sciences Learning Specialist, Lisa Diekow [ldiekow@ufsa.ufl.edu](mailto:ldiekow@ufsa.ufl.edu), is highly encouraged.

### **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>. Online 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.

### **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 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)