Implementation Science for Global Health – 3 credit hours
MHCH 890.971.SP16

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A. **Course Description:** This graduate level course is an introduction to implementation science with an emphasis on its application for global health. The course will first highlight current challenges in global health and the role of implementation science in addressing them, including the development of practice-based research activities and the provision of technical support for program implementation. The course then will define current implementation research frameworks and active implementation frameworks and describe the interface between improvement science and implementation science. Students will have the opportunity to work in groups and independently.

**Course Competencies:**
1. Understand how implementation issues, causes and solutions are approached differently by various stakeholders.
2. Explain why implementation science is necessary for achieving global health goals and objectives and how it contributes to designing policies and interventions/programs that are implementation-informed and fit to local contexts.
3. Describe frameworks for applied implementation and implementation research and characterize the differences.
4. Using an appropriate implementation science framework, develop or tailor approaches and activities to successfully implement an intervention.
5. Identify and apply stage-appropriate implementation strategies to address barriers at all levels of the system.

B. Course Prerequisites: There are no prerequisites for MHCH 890.971.SP16. Since this is an online course, students are expected to have access to the internet.

C. Course Resources: Course resources, including readings, lectures, and videos will be available on the Sakai site as VoiceThreads, web links and pdf documents.

D. Assignments:
   1. Weekly assignments:
      Completion of all weekly assignments is required to ensure comprehension of the topic and to master application of the material to real world problems. Students are expected to be actively engaged in all class discussions on the Sakai discussion boards and to contribute to the discourse in a positive and valuable manner. In this course, there will be several assignments that involve students working together in a group. Students are expected to work collegially with the team and to participate fully in the group’s activity by completing assigned tasks, providing meaningful and constructive feedback, and meeting pre-determined group deadlines. It will be required to log into the Sakai site several times during the week to facilitate work being done in a timely manner. Students who expect to be unable to log on to Sakai should inform the instructor and fellow group members in advance. Assignments are expected to be turned in on time. If assignments cannot be turned in on time, an explanation should be provided to the Instructor. Assignments submitted more than a week late without such notice will be subject to a penalty, i.e., points will be deducted.

   2. Final Group Presentations:
      Each group will select one of two options listed below citing resources and references from the course and other resources that were used to build your case.
      Option 1: Students will select an implementation issue/problem in global health and apply what they learned regarding implementation science (frameworks, tools, and evaluations) to recommend a course of action that would help policy makers, funders, or a community (choose one group) within the global health context to solve the issue.
      Option 2: Students will select a program and recommend implementation or improvement methodologies to improve program effectiveness and outcomes.

E. Final grade scale:
   The distribution of points for each course requirement is shown below:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>% of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Individual Assignment</td>
<td>40%</td>
</tr>
<tr>
<td>2) Group Assignment</td>
<td>25%</td>
</tr>
<tr>
<td>3) Participation</td>
<td>15%</td>
</tr>
<tr>
<td>4) Final Group Presentation</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

   Individual, group assignments, and final group presentation will be graded on the following dimensions:
   - Clear and appropriate application of course materials and other resources, and citation of resources (50 percent)
   - Effective and logical analysis, including the use of figures and tables when required (35 percent)
• Originality (15 percent)

Using these criteria, individual assignments will be graded on a 10-point scale; group assignments will be graded on a 4-point scale; and participation will be graded on a 1-point scale.

Numeric grades will be given for assignments, but a letter will be given for the final course grade. Grading will be according to the following scheme:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Clear Excellence</td>
</tr>
<tr>
<td>P</td>
<td>Entirely Satisfactory</td>
</tr>
<tr>
<td>L</td>
<td>Low Passing</td>
</tr>
<tr>
<td>F</td>
<td>Fail</td>
</tr>
</tbody>
</table>

Typically, H grades are given to those scoring 85% or above, P to scores of 70% and above and L to scores of 55% and above. These are guidelines, and are not meant to be absolute numbers.

A grade of H will indicate effort beyond the expectations of the assignment and production of an exceptional output. A P is completely acceptable and indicates meeting the expectations of the assignment. An L indicates a passing performance, but that the effort is minimally acceptable.

Course Evaluation
Course participation includes completion of the UNC-CH’s online course evaluation. Your responses will be anonymous, with feedback provided to the instructors in the aggregate. Open-ended comments will be shared with instructors, but individual students are not identified. Providing constructive course evaluative feedback is a professional responsibility. We appreciate your feedback as it is critical for improving the quality of our courses.

F. Honor system: As part of the UNC Honor Code as set forth in the Instrument of Student Judicial Government, Carolina students pledge to maintain ideals of academic honesty, personal integrity, and responsible citizenship. When a student applies to Carolina, he/she undertakes a commitment to the Honor Code principles. The University endeavors to instill in each student a love of learning, a commitment to fair and honorable conduct, and respect for the safety and welfare of others. It also strives to protect the community from those who, for whatever reason, do not embody these values in their conduct, and to protect the integrity of the University and its property for the benefit of all.

G. On-line course evaluation: The Gillings School uses an anonymous on-line evaluation system to assess the quality of instruction and learning. The system opens during the last week of class. The instructors will only see the aggregate data with any comments at the end of the course and after grades are turned in. It is your responsibility as a student to complete the evaluations. You will be sent multiple email reminders until it is completed.

H. Valuing, recognizing and encouraging diversity: Promoting and valuing diversity in the classroom enriches learning and broadens everyone’s perspectives. Inclusion and tolerance can lead to respect for others and their opinions and is critical to maximizing the learning that we expect in this course. Our own closely held ideas and personal comfort zones may be challenged. The results, however, create a sense of community and promote excellence in the learning environment. Diversity includes considerations of (1) the variety of life experience others have had, and (2) factors related to
“diversity of presence,” including, age, economic circumstances, ethnic identification, disability, gender, geographic origin, race, religion, sexual orientation, and social position. This class will follow principles of inclusion, respect, tolerance, and acceptance that support the values of diversity.

Welcome to MHCH 890.971.SP16- Course Orientation and Self-Introductions

Objectives: After completing this module, students will: improve their understanding of on-line learning skills, develop their own strategy for on-line learning and for group learning, improve their on-line communications skills and become familiarized with the Sakai site. Students will also learn about their colleagues’ experiences in global health and implementation.

Watch: Welcome by Dr. Herbert Peterson in VoiceThread

Required Readings:
How Students Develop Online Learning Skills
http://www.educause.edu/ero/article/how-students-develop-online-learning-skills

Five-step Strategy for Student Success with Online Learning

How to Succeed in Group Work

Communicating Effectively
http://learningcommons.ubc.ca/student-toolkits/working-in-groups/communicating-effectively/

Sakai Frequently Asked Questions
http://sakaitutorials.unc.edu/module_build.php?tag=syllabus

VoiceThread Tutorial

BlueJeans Tutorial

PART I: Global Health Overview

Week 1 – Global Health Context: Challenges and Opportunities

Learning Objectives: After completing this module, students will learn about global health goals, objectives, priorities, and interventions for achieving them, the global health context, and the challenges and opportunities presented with the Millennium Development Goals (MDGs) and the new Sustainable Development Goals (SDGs).

Watch: Global Health: Challenges and Opportunities Moving Forward in VoiceThread Week 1
Week 2 – Implementation Science for Global Health: Why is it needed?

**Learning Objectives:** After completing this module, students will have a deeper understanding of the global health context and challenges related to health systems and the health workforce in low and middle income countries. They will also better understand the role of innovations, a stronger focus on implementation of innovations, and implementation science in addressing some of these challenges.

**Watch:** Global Health: Challenges and Opportunities Moving Forward in VoiceThread Week 2.

**Required Readings:**


**PART II: Implementation Science Overview**

**Week 3 – History and Why Implementation is Important**

**Learning Objectives:**
After completing this module, students will be able to define implementation, explain implementation in the context of moving research to practice, and describe the evolution of the field of implementation science.

**Required Readings:**


**Optional Readings:**

**Watch:**
IBM Innovation Man: [https://www.youtube.com/watch?v=MudaxA80eI4](https://www.youtube.com/watch?v=MudaxA80eI4)


What is Implementation Science: [http://www.implementation.eu/implementation](http://www.implementation.eu/implementation)


Week 4 – Intro to Applied Implementation & Implementation Research

Learning Objectives:
After completing the next three modules, students will be able to identify both applied and implementation research frameworks and differentiate between applied implementation and implementation research based on their readings and review of frameworks.

Required Readings:


Optional Reading:

Watch:
Applied Implementation - Dean L. Fixsen https://www.youtube.com/watch?v=MuKLOhqIe-g

Week 5 – Applied Implementation Frameworks

Learning Objectives:
Identify both applied and implementation research frameworks and differentiate between applied implementation and implementation research based on the readings and review of frameworks.

Required Readings:


Watch:
Video Vignette 13: Active Implementation & Scaling up [http://implementation.fpg.unc.edu/module-1/rationale](http://implementation.fpg.unc.edu/module-1/rationale)

An Overview of Active Implementation Frameworks: [http://implementation.fpg.unc.edu/module-1](http://implementation.fpg.unc.edu/module-1)

### Week 6 – Implementation Research Frameworks

**Required Readings:**


Quality Enhancement Research Initiative (QUERI) Implementation Guide, Department of Veterans Health Administration, Health Services Research & Development, 2013. [Section 1, Part 1](#)

Watch:
John Landsverk: Mixed Methods and Measures in Implementation Research: [https://www.youtube.com/watch?v=uT5nnyMGobQ](https://www.youtube.com/watch?v=uT5nnyMGobQ)

### PART III: Implementation in Practice: Creating Conditions for Successful Implementation

### Week 7 – Common Factors Related to Successful Implementation

**Learning Objectives:**
After completing this module, students will be able to identify and describe common factors required for successful implementation across implementation science frameworks, assess and discuss differences between IS frameworks, and describe common implementation processes (steps and activities).

**Required Readings:**


Watch:
Advanced Topics for Implementation Science Research: Use of Theory in Implementation Research: EPIS
https://www.youtube.com/watch?v=OYw6g0F1rTs

Week 8 – Understanding the Implementation Science Context

Learning Objectives:
After completing this module, students will be able to define inner and outer context; identify and describe the multi-level context for implementation of an evidence-based program; identify and describe key actors, implementation strategies and outcomes at each level of the system.

Required Readings:


Optional Readings:


Week 9 – Evidence for Decision-Making

Learning Objectives: After completing this module, students will understand the concepts of evidence-based medicine, evidence-based public health practice, and evidence-based implementation.

Required Readings:


Watch:

Optional Resources:
SUPPORT (http://www.support-collaboration.org)
EVIPNET (http://www.who.int/rcp/evipnet)
E2Pi (http://www.e2pi.org)
Week 10 – Stages and Phases of Implementation

Learning Objectives:
After completing this module, students will be able to identify and describe the common stages/phases of implementation, describe key activities in each stage of implementation, and develop a plan to apply this knowledge to assess the implementation stage of initiatives in global health.

Required Readings:


Van Dyke M, Naoom S. The critical role of state agencies in the age of evidence-based approaches: The challenge of new expectations. *J Evidence-based Soc Work*. Published online: 14 Jun 2015

Watch:
Stages of Implementation Module- [http://implementation.fpg.unc.edu/module-4](http://implementation.fpg.unc.edu/module-4)


PART IV: Implementation Quality

Week 11 – Implementation Capacity

Learning Objectives:
After completing this module, students will be able to identify and describe the drivers of successful implementation, describe implementation strategies and practices, and apply this knowledge to assess the implementation drivers in practice.

Required Readings:

Metz A, Bartley L. Active Implementation Frameworks for Program Success: How to Use Implementation Science to Improve Outcomes for Children. *Zero to Three, Chapel Hill, NC*. 2012;March:11-18. (Repeated Reading)

Watch:
Implementation Drivers:
http://implementation.fpg.unc.edu/module-2

Drivers Ed-Selection:

Case Example: Reflection and Application of Implementation Drivers in Minnesota - Vicky Weinberg, Minnesota Department of Education- http://implementation.fpg.unc.edu/resources/video-vignette-08-activity-25a

Week 12 – Evaluation

Learning Objectives:
After completing this module, students will be able to define core components, as they relate to interventions; define fidelity and describe the common factors that comprise the construct of fidelity; and explain the role of fidelity in explaining program outcomes. Students will also be able to discriminate between evaluating implementation and evaluating outcomes.

Required Readings:


Optional Readings:
Durlak JA, Dupre EP. Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting the implementation. Am J Community Psychol 2008; 41:327-50. (Repeated reading)

Watch /Listen:
Evaluating Implementation and Performance to Improve Program Quality
http://dwwlibrary.wested.org/media/evaluating-implementation-and-performance-to-impro

PART IV: Implementation Quality

Week 13 – Continuous Quality Improvement

Learning Objectives: After completing this module, students will understand challenges related to improvement research. They will also learn the role of quality improvement in maximizing the impact of a newly implemented health practice or program as well as how to identify and develop changes that will result in improvement.

Module 5: Improvement Cycles
http://implementation.fpg.unc.edu/module-5

Lesson 6: The PDSA Cycle
https://unc-fpg-cdi.adobeconnect.com/_a992899727/ai.lesson6/

Required Readings:


PART V: Strategies for Scaling and Sustaining

Week 14 – Scalability and Sustainability

Learning Objectives: After completing this module, students will understand the different scale up perspectives and methods intended to increase the impact of global health programs. They will also understand issues regarding program sustainability and why some health programs fail after implementation.

Watch Video:
David Chambers: Advancing the Science of Sustainability
https://www.youtube.com/watch?v=N6PUZ4PxhrM

Required Readings:


Optional Readings:


**Week 15 – Lessons Learned in Global Health Implementation**

**Watch:** Concluding remarks by Dr. Herbert Peterson

Final group presentations due by May 6, 4:00 PM