Tufts University, Friedman School of Nutrition Science and Policy

**NUTR 227—INTERNATIONAL NUTRITION PROGRAMS**

**Fall 2018**

**Class Meetings:**  
Wednesdays 3:15-6:15  
Jaharis Room 156

**Instructor(s):**  
Erin Boyd, MS  
[Erin.Boyd@tufts.edu](mailto:Erin.Boyd@tufts.edu)  
Tel: 508-404-3408  
Skype: boyderin

**Office hours:**  
By appointment

**Graduate Credits:**  
1 credit

**Prerequisites:**  
Nutr 203 (or instructor permission)

**Course Description:**

The goal of this course is to expose students to major global nutrition programs and strategies designed to lessen the global burden of nutrition related morbidity and mortality. Both prevention and treatment options for major nutrition related disorders that dominate contemporary populations will be discussed. This course will cover: a) current debates in the cause, prevention and treatment of global nutrition issues, b) the range of options for interventions that exist, and those actually used, c) approaches to problem assessment, (including the process of considering alternatives according to context), d) examples of successful nutrition interventions, e) constraints to success (what makes or breaks major program successes), and f) key global institutions and organizations involved in nutrition policy and programming.

Each session will seek to cover: a) main problems still needing to be resolved; b) priority/target populations; c) interventions used/not used. Students will examine solutions at the local, national, and international level, including policy impact on nutrition programs, interventions, and public health practices.

**Texts or Materials:**

All materials will be posted on Trunk.

**Course Objectives**

On completion of the course, students will be able to use their understanding of global nutrition issues to:

1. Analyze the conceptual framework of malnutrition and its relation to global nutrition issues.
2. Identify populations at risk of malnutrition and understand options for interventions and multiple layers to reach these groups.
3. Understand the global nutrition narrative and its interlinkages with different sectors
4. Evaluate approaches for preventing and treating undernutrition; and formulate feasible and effective nutrition interventions strategies for various situations of nutrition related morbidity or mortality.
5. Be familiar with global agencies’ role and responsibilities in setting the nutrition agenda normatively and programmatically.

**Academic Conduct:** Each student is responsible for upholding the highest standards of academic integrity, as specified in the Friedman School’s Policies and Procedures manual (http://nutrition.tufts.edu/student/documents) and Tufts University policies (http://uss.tufts.edu/studentaffairs/judicialaffairs/Academic Integrity.pdf). It is the responsibility of each student to understand and comply with these standards, as violations will be sanctioned by penalties ranging from failure on an assignment and the course to dismissal from the school.

**Classroom Conduct:** Participation in class is expected and contributes to the course grade. No electronic devices are to be used during the lectures, and students are expected to actively engage in small group work during the lectures.

**Assessment and Grading:**

**Grading:** Semester requirements include, a) 2 short memo-style papers (2 X 20%); b) active class participation in discussions (10%); c) a term paper framed in terms of a proposed project or program design (using a template provided) (50%).

A passing grade in the course is B- or better. Course grades will be based on the below (subject to revision during the course):

- A > 94%
- A- 90-<94%
- B+ 87-<90%
- B 84-<87%
- B- 80-<84%

**Assignment 1:** You are the Nutrition Technical Advisor for a large-bilateral donor and you have received the proposal for addressing undernutrition at a national level (choose either DRC or Yemen). You must prepare a 1500 word memo for Director of Child Survival suggesting whether or not to fund the proposal as it is, with suggested changes, or to decide to use limited resources to support another country. You should use the SUN documents to support your argument. **Due October 10th by 11:59 EST.**

**Assignment 2:** Memo style paper on a topic of your choice that discusses a relevant controversy related to global nutrition programs. Topics may relate to design, intervention, monitoring or evaluation (such as use of targeted programs for special populations, provision
of breastmilk substitutes for infants, vitamin A supplementation, iron supplementation in malaria, reliance on specialized ready to use products for the prevention and treatment of acute malnutrition, the baby-friendly hospital initiative, etc.). **2000 words or less; exclusive of**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic &amp; Lecturer</th>
<th>Date</th>
<th>Assignments Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conceptual Framework of Malnutrition and the Global Nutrition Narrative</td>
<td>September 5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Defining malnutrition: Measurement and Assessment</td>
<td>September 12</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Improving Infant and Young Child Feeding Practices</td>
<td>September 19</td>
<td></td>
</tr>
</tbody>
</table>
| 4    | HIV and Nutrition Programming  
**Guest Speaker: Rebecca Egan** | September 26 |                  |
| 5    | **No class- nutrition data summit participation** | October 3 |                  |
| 6    | Micronutrient Deficiency Prevention and Control: Fortification, Supplementation and Behavior Change communication | October 10 | Memo 1 due      |
| 7    | Prevention and Treatment of acute malnutrition: Community Management of Acute Malnutrition (CMAM) | October 17 |                  |
| 8    | Positive Deviance Inquiry  
**Guest lecturer: Monique Sternin** | October 24 |                  |
| 9    | Overnutrition and obesity programming | October 31 |                  |
| 10   | Water sanitation and hygiene Interventions | November 7 | Memo 2 due      |
references. Due November 7th by 11:59 EST.

Final Project: Proposal for funding. Text (excluding annexes) not to exceed 5000 words. Must include 3 annexes (annexes 1 and 2 from the template and the logframe provided). Due December 13th by 11:59 EST.

Accommodation of Disabilities:
Students with documented disabilities are entitled to academic accommodation appropriate to their needs. If you require accommodations for this course, please contact me confidentially prior to the end of the second week of classes.

Course Schedule:
This schedule is subject to modification at the instructor’s discretion and based on availability of guest speakers

Week 1:
Conceptual Framework of Malnutrition and the Global Nutrition Narrative
Objectives:
- Summarize global trends in nutrition programming
- Compare conceptual models explaining nutrition causality
- Debate current global recommendations for programming

Required Readings:
- Lancet Series 2013 Executive Summary
- SDG link (Guardian article)

Week 2:
Defining malnutrition: Measurement and Assessment
Objectives:
- Determine the best ways to conduct measurement of individual and population level nutritional status
- Explain methodologies to ensure that measurements are conducted and analyzed properly
- Be familiar with a multisectoral intervention in Chad

Instructional Objectives: This lecture introduces concepts regarding the nutritional assessment of individuals and populations. The many definitions and metrics of malnutrition, hunger and obesity will be discussed. Why and what do we need to measure to ensure a successful nutrition program, will be covered. Optimal measurement of individual and population nutritional status to best identify individuals targeted for prevention and treatment strategies and indicators most appropriate for program evaluation will be debated.

Required Readings:
- WHO/UNICEF Growth Standards
- Mothers Understand MUAC and Can Do It Well
- Chad reading

Class 3: Improving Infant and Young Child Feeding Practices
Objectives:
- Synthesize evidence on the importance of exclusive and continued breastfeeding, as well as good complementary feeding
- Demonstrate the different modalities through which to support infant and young child feeding
- Critique different Infant and Young Child Feeding programs

Instructional Objectives: Children between 6-23 months are the most vulnerable for becoming undernourished- both chronically and acutely. In order to prevent undernutrition and to ensure optimal growth, the importance of exclusive and continued breastfeeding, as well as good complementary feeding is explored. Infant and young child feeding programs are analyzed in order to understand the different modalities through which to support infant and young child feeding.

Required Readings:
• Rollins, Nigel C et al, (2016), Why invest, and what it will take to improve breastfeeding practices? The Lancet, Volume 387, Issue 10017, 491 - 504
• Yotebieng, Marcel et al. (2016), Ten Steps to Successful Breastfeeding programme to promote early initiation and exclusive breastfeeding in DR Congo: a cluster-randomised controlled trial, The Lancet Global Health , Volume 3 , Issue 9 , e546 - e555
• Horta et al. (2013). Long-term Effects of Breastfeeding
• UNICEF 2010. The Community Infant and Young Child Feeding Counseling Package: Participant Materials. ** please skim so you are familiar**
• WHO 2013. The Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition. ** please skim so you are familiar**

Class 4:

Guest Lecturer: Rebecca Egan (FANTA)

HIV and nutrition programming: Preventing mother to child nutrition, NACS, and Food by Prescription

• Analyze what is the role for ‘nutrition’ in HIV projects?
• Examine the evidence base for policies on nutrition interventions

Required Readings:

• Ivers, L. et. al. 2010. Food assistance is associated with improved body mass index, food insecurity and attendance at clinic in an HIV program in central Haiti: a prospective observational cohort study. AIDS Research and Therapy 7:33:1-8

Optional Reading:


Class 5: NUTRITION DATA SUMMIT PARTICIPATION- no class this week
Class 6:
Micronutrient Deficiency Prevention and Control

**Objectives:**

- Explain micronutrient intervention policies and programs
- Plan different types of micronutrient interventions: Multiple Micronutrient Powders (MNPs)- Sprinkles, RUFs, lozenges, syrups, candies, atta flour, etc.
- Compare approaches to improving micronutrient status: Dietary diversity, supplementation, fortification, biofortification

**Required Readings:**

- Mason et al, 2014, The Great Vitamin A Fiasco

Class 7:
Prevention and Treatment of acute malnutrition: Community Management of Acute
Malnutrition (CMAM)

**Objectives:**

- Explain the basic concepts and rationale of preventing and treating acute malnutrition
- Summarize the protocols of CMAM and its implementation
- Justify the role of community mobilization in the successful implementation of CMAM

**Required Readings:**

- FANTA (2009) Preventing malnutrition in children under 2 approach (pm2a): a food-assisted approach. Title II Technical Reference Materials. FANTA/USAID Read Pages 1-5 only

Class 8:
Positive Deviance Inquiry
*Guest lecturer: Monique Sternin*

*Objectives:*
- Examine one approach to behavior change communication
- Identify problems that may be addressed through the PDI approach

*Required Readings:*
- PD in hospitals (MRSA)
- Morales and Schooley
- Vietnam example

Class 9:
Overweight and obesity programming

*Objectives:*
- Examine models that include improvement in both undernutrition and overnutrition as outcomes
- Analyze different behavior change communication techniques and packages that work for addressing overnutrition

*Required Readings:*
- Seligman HK 2010, Food insecurity is associated with chronic disease among low income NHANES participants. J Nutr
• Thorndike, AN, Healey, E, Sonnenberg, L, Regan, S. Participation and cardiovascular risk reduction in a voluntary worksite nutrition and physical activity program. Preventive Medicine 52: 164-166, 2011.


Class 10:
Water sanitation and hygiene Interventions
Objectives:

• Assess how the water, sanitation and hygiene context can affect nutritional status
• Explain the impact of water, sanitation and hygiene interventions on nutritional status
• Compare innovative programs that address the sanitation and hygiene situation of under 2s

Required Readings:

• Chambers, R. Sanitation and Stunting in India Undernutrition’s Blind Spot. Economic and Political Weekly.
• Shine trial

Class 11:
Agriculture Interventions for Nutrition Sensitive Programming
Objectives:

• Argue the role of food security and agriculture interventions in promoting nutrition
• Assess the effects of combined agriculture and nutrition education on child growth
• Compare current activities involving food security, nutrition and agriculture interventions

Required Readings:

• USAID/FFP, Malawi CSI and BEST analysis (Skim)
• Orange Fleshy Sweet Potatoes

Optional Readings:

• Quisumbing et al, 2001, IFRPI, Empowering Women to Achieve Food Security
• AVDRC (November 2012), The World Vegetable Center, Promoting Best Post Harvest Practices: Skim success stories
• Dunn, E (2013), FIELD Report No. 18: Smallholders and Inclusive Growth in Agricultural Value Chains

Class 12:
School-based programs
Objectives:

• Assess how early childhood development impacts nutritional status
• Justify the objectives of school-based programs, with particular emphasis on the design of successful school-based programs
• Summarize the concepts of food for education
• Explain issues and constraints in the wide scale implementation of school programs

Required Readings:

• Bhowmick, N. Postcard from Vrindaban: In India, the World's Largest School Lunch Program Friday, Nov. 05, 2010; Read more: http://www.time.com/time/world/article/0,8599,2029625,00.html#ixzz161G9w4 Bd USDA.
• School Feeding in El Salvador: Preliminary Findings of a Case Study of the Transition
• Kuhn A. Nutrition Program Boosts Poor Students In China http://www.npr.org/templates/story/story.php?storyId=104753329

Class 13:
Cash Transfers
Objectives:

• Explain the principles of cash transfer programs in relation to nutrition outcomes
• Assess of large-scale national level cash transfer programs
• Compare constraints associated with cash transfers in influencing nutrition
Required Readings:

- Aguero et al. 2008 The Impact of Unconditional Cash Transfers on Nutrition: The South African Child Support Grant