Welcome to NUTC 203
I am excited to meet each of you and facilitate interesting discussions about nutrition programs in low- and middle-income countries. We will look at how different nutrition focused interventions can be linked to other public health and food systems work in order to improve individual nutritional status.

I believe that the diversity of student experiences and perspectives is essential to the deepening of knowledge in this course. I consider it part of my responsibility as an instructor to address the learning needs of all of the students in this course. I will present materials that are respectful of diversity: race, color, ethnicity, gender, age, disability, religious beliefs, political preference, sexual orientation, gender identity, socioeconomic status, citizenship, language, or national origin among other personal characteristics.

I am committed to supporting students’ wellbeing, including their mental health, and remain open to providing additional time or resources in support of students’ academic pursuits. I recognize that the past years of the pandemic and related stresses can disrupt learning for many and am always available to discuss any additional information in the most effective way for each individual.

Important Information:

Class Meetings: Online, Asynchronous
Instructor(s): Dr. Erin Boyd (she, her)
              Erin.boyd@tufts.edu
              Phone: 508-404-3408
Semester Hour Units: 3 SHU
Prerequisites: Graduate standing or instructor permission

Course Communications:
I appreciate hearing questions from students and welcome individual office hours, which can be scheduled by email.

Office Hours: By appointment
I have flexible availability for office hours, and am happy to meet and discuss course content assignments, or career paths at a mutually convenient time.

Course Summary:
The course will analyze different nutrition specific interventions and how to combine them in order to address malnutrition in all its forms. Emphasis will be on successful program design and delivery. The
themes of interventions reviewed in this course includes: Maternal Infant and Young Child Nutrition (MIYCN); prevention and treatment of acute malnutrition, prevention of obesity, and micronutrient deficiency control. By the end of this course, students will be familiar with a wide range of nutrition interventions and understand how to combine them to address malnutrition in low- and middle-income countries.

Course Goals:

1. Students will learn how to effectively combine different nutrition interventions to maximize impact on preventing and addressing malnutrition.
2. Students will learn several delivery modalities of nutrition interventions and be able to analyze the best way to meet nutrition needs in different contexts.
3. Students will be able to identify constraints associated with successful development and delivery and utilization of program responses.
4. Students will be able to compare how policies and guidelines at global, national and local levels can be used to guide the successful implementation of programs.

Texts or Materials:
No textbooks required; all materials will be available on (https://canvas.tufts.edu)

How to be Successful in this Course:
Students are expected to respond to discussion boards and their classmate’s posts in a timely manner, submit assignments when due unless a previous arrangement is made with the instructor. The key to success is to communicate often if there are any questions or changes. Asking questions and sharing experiences will further enable success in this course.

Assignments and Grading:
Assignments include weekly discussion board responses and three papers which build off one another. All assignments are posted on the Canvas site under the “Assignments’ tab.

Lectures and Readings
Lectures are recorded by Dr. Boyd. Students are required to watch each lecture. Readings are focused on country specific examples and case studies to enhance learning.

Written Assignments
There are three written assignments that will build off one another. Assignment 1 (maximum 1500 words) will entail choosing a country and researching the nutrition situation of vulnerable groups. In Assignment 2 (maximum 1500 words), the nutrition problem that you choose to address in the country from Assignment 1 will be have objectives to address needs outlined. The final term paper (maximum 2500 words) will use the work from Assignments 1 and 2 to construct a full proposal to a hypothetical donor (of your choice) from an implementing partner of your choice.
Discussion Board Postings
Discussion boards are intended to facilitate classroom discussion on specific international nutrition topics and controversies. There will be eight discussion board questions to respond to. These will be posted onto Canvas on Sunday. Students are expected to post a reflection to the discussion board question/topic based on the assigned article by Thursday night before midnight (by 11:59pm EST). The first posting should be by September 15th (for Week 2). Discussion board topics may be a class activity relating to the lecture material, ‘quiz’-like questions pertinent to the lecture material or current ‘hot’ topics/debates in nutrition programming community. The nature of the questions will require between 350-500 words initial response. You are also expected to respond to at least two of your classmates' postings. Adherence to these participation requirements will be tracked and I will provide general feedback each week. Students should submit assignments and respond to discussion boards on Canvas.

The following guidelines are used in evaluating course performance:

1. Assignments will be evaluated on the basis of completeness, originality, scientific soundness, and relevance to the assigned topic.
2. Written work will be evaluated on the quality of thought, completeness, and adherence to guidelines, scientific integrity, and ability to incorporate and communicate ideas and information effectively.
3. Adherence to instructions and guidelines of the assignments.
4. Participation in all class activities and discussions. Please seek extensions in writing if you cannot meet a deadline.
5. Grading for the course will be based on the below assignment schedule and point distribution below

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Due Date</th>
<th>% Of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion forum participation (first one due Sept 15)</td>
<td>Eight times out of the semester (2,3,5,7,9,10,11,12)</td>
<td>30</td>
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<tr>
<td>Assignment 1- Needs Assessment (1500 words)</td>
<td>October 14</td>
<td>20</td>
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<tr>
<td>Assignment 2- Program proposal development (defining objectives) (written paper, 1500 words)</td>
<td>November 18</td>
<td>20</td>
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<tr>
<td>Final- the final paper will build on Assignments 1 and 2 for a full proposal (maximum 2500 words)</td>
<td>December 9</td>
<td>30</td>
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<tr>
<td>Total</td>
<td></td>
<td>100</td>
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</tbody>
</table>
Grading Range:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
<th>Grade</th>
<th>Score</th>
<th>Grade</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>98.50-100</td>
<td>B-</td>
<td>80-82.49</td>
<td>D+</td>
<td>67.50-69.99</td>
</tr>
<tr>
<td>A</td>
<td>92.50-98.49</td>
<td>C+</td>
<td>77.50-79.99</td>
<td>D</td>
<td>62.50-67.49</td>
</tr>
<tr>
<td>A-</td>
<td>90-92.49</td>
<td>C</td>
<td>72.50-77.49</td>
<td>D-</td>
<td>60-62.49</td>
</tr>
<tr>
<td>B+</td>
<td>87.50-89.99</td>
<td>C-</td>
<td>70-72.49</td>
<td>F</td>
<td>0-59.99</td>
</tr>
<tr>
<td>B</td>
<td>82.50-87.49</td>
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A passing course grade at the Friedman School is a B- or better. At the Friedman School an A+ grade and an A grade are both calculated as 4.00 grade points in a student’s grade point average.

Instructions for Submission of Assignments and Exams:
Discussion board postings should be made by Thursday 11:59pm EDT and responses to classmates by Saturday 11:59pm EDT. Written assignments are due by 11:59pm EDT on the due date via Canvas. Students who are unable to complete an assignment or exam on time for any reason should notify the instructor by email, text message, or phone call prior to the deadline, with a brief explanation for why the extension is needed.

Class Participation
Class participation for this course is an integral component of the learning agenda. Just as we would expect you to attend every lecture in a ‘live’ class, we expect everyone to participate in the discussion boards, described below.

Academic Conduct:
You are responsible for upholding the highest standards of academic integrity, as specified in the Friedman School’s Policies and Procedures Handbook located at this web page: https://nutrition.tufts.edu/about/policies-and-procedures, as well as Tufts University’s policies (https://students.tufts.edu/community-standards/support-resources/academic-integrity-resources). This includes understanding and avoiding plagiarism, which is defined as the unacknowledged use of someone else’s published or unpublished work. It is the responsibility of each student to understand and comply with academic integrity standards, as violations will be sanctioned by penalties ranging from failure on an assignment and the course to dismissal from the school.

Accommodation of Disabilities:
We are committed to ensuring that all students have the resources and individual support that you need to succeed. Tufts University is committed to providing equal access and support to all students through
the provision of reasonable accommodations so that each student may access their curricula and achieve their personal and academic potential. If you have a disability that requires reasonable accommodations, please contact the Friedman School Assistant Dean of Student Affairs at 617-636-6719 to make arrangements for determination of appropriate accommodations. Please be aware that accommodations cannot be enacted retroactively, making timeliness a critical aspect for their provision.

Remote Participation:
- This course will be delivered online and asynchronously.

Technical Support:
Online course support is provided by Friedman support staff and/or IT Support. Please do not contact faculty for technical support.

- **Telephone:** (617) 627-3376
- **Email:** canvas@tufts.edu
- **Hours:** 24 hours a day, seven days a week.

When reporting a problem, please include:
- The name and number of your online course (NUTC 203)
- Your operating system and browser
- A detailed description of the problem

This information will expedite the troubleshooting process. If you are sending a support request via email, please use your Tufts email address. Many problems with Canvas are a result of using an unsupported browser. The most up to date versions of Firefox, Chrome, Edge, and Safari are acceptable.

Course Overview:

The course is organized on Canvas by weekly modules. All readings posted for the week they are assigned, and assignments posted in the order to complete them.
Course Overview:

<table>
<thead>
<tr>
<th>DATE</th>
<th>WEEK</th>
<th>COURSE TOPIC</th>
<th>ACTIVITIES/ASSIGNMENTs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 3-9</td>
<td>Week 1</td>
<td>Overview of nutritional risks in low and middle-income countries</td>
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<tr>
<td>Sept 10-16</td>
<td>Week 2</td>
<td>Nutrition Metrics</td>
<td>Discussion board</td>
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<tr>
<td>Sept 17-23</td>
<td>Week 3</td>
<td>Fortification: Micronutrient Deficiency Prevention and Control Part 1</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Sept 24-30</td>
<td>Week 4</td>
<td>Supplementation: Micronutrient Prevention and Control Part II</td>
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<tr>
<td>Oct 1-7</td>
<td>Week 5</td>
<td>Infant and Young Child Feeding Part I-Breastfeeding and Complementary Feeding</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Oct 8-14</td>
<td>Week 6</td>
<td>Infant and Young Child Feeding Part II-Approaches</td>
<td>Assignment 1 due October 14, LO 1,2</td>
</tr>
<tr>
<td>Oct 15-21</td>
<td>Week 7</td>
<td>Maternal nutrition</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Oct 22-28</td>
<td>Week 8</td>
<td>Prevention and Treatment of acute malnutrition; Community Management of Acute Malnutrition (CMAM)</td>
<td></td>
</tr>
<tr>
<td>Oct 29- Nov 4</td>
<td>Week 9</td>
<td>Simplified approaches in wasting treatment</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Nov 5-11</td>
<td>Week 10</td>
<td>Packages to prevent undernutrition</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Nov 12-18</td>
<td>Week 11</td>
<td>Preventing overweight and obesity</td>
<td>Assignment 2 due November 18, LO 2,3</td>
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<tr>
<td>Nov 19-25</td>
<td>Week 12</td>
<td>Community Health Workers in nutrition</td>
<td>Discussion board</td>
</tr>
<tr>
<td>Nov 26-Dec 2</td>
<td>Week 13</td>
<td>Monitoring and Evaluation</td>
<td></td>
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<tr>
<td>Finals</td>
<td></td>
<td></td>
<td>Final paper due December 9, LO 1,2,3,4</td>
</tr>
</tbody>
</table>

*This schedule is subject to modification at the instructor’s discretion*
Topics, Assignments, and Learning Objectives for Each Class Session:

Week 1

Course topic: Overview of nutritional risks in low- and middle-income countries

Learning Objectives:

- Summarize global trends in nutrition programming
- Compare conceptual models explaining nutrition causality
- Categorize current global recommendations for programming

Required readings

- Global Nutrition Report, Executive summary, 2022
- IFPRI, Food Inflation and Child Undernutrition in Low- and Middle-Income Countries, November 2022

Week 2

Course topic: Nutrition Metrics

Learning Objectives:

- Demonstrate nutrition data sources and consolidated products
- Explain the concepts of the results framework and the logical framework models
- Illustrate challenges with collected and analyzing nutrition data

Required Readings:

- Global Hunger Index (Synopsis), 2021

Assignments due: Discussion board posting

Week 3
Topic: Micronutrient Deficiency Prevention and Control, Fortification

Learning Objectives:

- Explain large scale food fortification approaches to address various micronutrient deficiencies
- Critique large scale food fortification in low- and middle-income countries
- Analyze home-based fortification approaches

Required Readings:


Assignments due: Discussion board posting


Week 4
Topic: Micronutrient Prevention and Control, Supplementation

Learning Objectives:

- Describe different supplementation products and approaches to address multiple micronutrient deficiencies through the health system

Required readings:

- UNICEF. Coverage at a crossroads: new directions for vitamin A supplementation programmes. New York, 2018. (Chapters 1,2,4)


Week 5

**Topic: Infant and Young Child Feeding Part I- Breastfeeding and Complementary Feeding Evidence**

**Learning Objectives:**
- Synthesize evidence on the importance of exclusive and continued breastfeeding, as well as good complementary feeding
- Identify key time periods in the lifecycle during which to reach mothers and children

**Required Readings:**
- UNICEF, 2016, From the First Hour of Life
- UNICEF, 2021, Fed to Fail

**Assignments due:** Discussion board posting

Week 6

**Topic: Infant and Young Child Feeding Part II- Approaches**

**Learning Objectives:**
- Illustrate policies that can be implemented in support of optimal infant and young child nutrition
- Demonstrate the different modalities through which to support infant and young child feeding
- Critique different Infant and Young Child Feeding intervention approaches

**Required Readings:**


Assignments due: Assignment 1

Week 7
Topic: Maternal nutrition

Learning Objectives:

• Synthesize evidence on maternal nutrition in relation to both women and children
• Demonstrate different approaches to improved maternal nutritional status
• Analyze child outcomes impacted by maternal nutrition

Required Readings:

• Zulfiqar A Bhutta, Balancing the benefits of maternal nutritional interventions; time to put women first!, The American Journal of Clinical Nutrition, Volume 109, Issue 2, February 2019, Pages 249–250

Assignments due: Online discussion board

Date: Week 8

Topic: Treatment of Wasting

Learning 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:

- ENN, Wasting Reset Synthesis (August 2021)

Week 9

Topic: Simplified Approaches to Wasting Treatment

Learning Objectives:

- Analyze the main types of simplified approaches
- Identify evidence gaps in relation to the implementation of simplified approaches

Required Readings:

Assignments due: Discussion board posting


Week 10
Topic: Packages to Reduce Undernutrition:

Learning Objectives:

- Explain the different interventions that can be bundled to mitigate stunting
- Summarize the importance of the 1000-day window of opportunity

Required Readings:


Assignments due: Discussion board posting

Week 11: Nutrition Transition, addressing overweight and obesity

Objectives:

- Explain the issue of the double burden of disease
- Analyze the causes and consequences of rising levels of overweight and obesity in low- and middle-income countries
- Summarize strategies to prevent overweight and obesity in low- and middle-income countries

Required Readings:


Assignments due: Assignment 2, Discussion board posting


Week 12:

Topic: Community Health Workers in nutrition

Learning Objectives:

- Analyze different community based public health networks
- Describe challenges using community health workers
- Describe challenges impacting community health workers’ performance

Required Readings:


Assignments due: Discussion board posting


Week 13

Topic: Monitoring and Evaluation

Learning Objectives:

• To describe with the conceptual framework for a project design
• To summarize key indicators for measuring changes in nutritional status
• To demonstrate best practices to measure infant and young child feeding behaviors

Required Readings:


Assignments due: None (Final assignment due December 9th)