

AREC 365: World Hunger, Population, and Food Supplies

M R Sharan

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- Version 1, Jan 4th 2026.
- This is the complete syllabus and you will be notified if substantial changes need to be made.

Textbook

The World Food Problem: Toward Understanding and Ending Undernutrition in the Developing World (6th Edition)

Howard D. Leathers and Kenneth L. Leonard.

(Other editions will not do.)

Preliminaries

This course is specifically designed to cover the issues of hunger, food security, and malnutrition without any prerequisites. It meets University of Maryland standards for the “Understanding Plural Societies” distribution requirement.

Basic Information

Instructor

M R Sharan (Sharan)

Office Hours: Thu 3:45–4:45 PM (schedule via email to TA)

Office: 2116A Symons Hall [Zoom Link]

Time and Location

Full class meeting, every Tuesday and Thursday, 2:00–3:15 PM

Classroom: ESJ 0202

Teaching Assistant

Lemi Daba (ldaba@umd.edu)

Prerequisites

Comfort with mathematics (algebra), statistics and/or economics will make the class easier, but we teach all the material you need in class and these subjects are not required. The class follows the textbook very closely with a few references to other material.

Understanding Plural Societies Learning Outcomes

This is the information provided by the University, describing courses that meet the requirements for “Understanding Plural Societies”. We will focus on the first four (starred) course outcomes.

Life in a globally competitive society of the twenty-first century requires an ability to comprehend both theoretical and practical dimensions of human difference. From that perspective, Understanding Plural Societies is the centerpiece of the University’s Diversity requirement. Courses in this category speak to both the foundations—cultural, material, psychological, historical, social, and biological—of human difference and the operation or function of plural societies.

Courses in Understanding Plural Societies must address at least 4 of the 6 Learning Outcomes. On completion of an Understanding Plural Societies course, students will be able to:

- (*)Demonstrate understanding of the basis of human diversity and socially-driven constructions of difference: biological, cultural, historical, social, economic, or ideological.
- (*)Demonstrate understanding of fundamental concepts and methods that produce knowledge about plural societies and systems of classification.
- (*)Explicate the policies, social structures, ideologies or institutional structures that do or do not create inequalities based on notions of human difference.
- (*)Interrogate, critique, or question traditional hierarchies or social categories.
- Analyze forms and traditions of thought or expression in relation to cultural, historical, political, and social contexts (e.g., dance, foodways, literature, music, philosophical and religious traditions).
- Use a comparative, intersectional, or relational framework to examine experiences, cultures, or histories of two or more social groups within a single society or across societies, within a single historical timeframe or across historical time.

In this class you will learn

Food

1. There is enough food in the world to feed every single person an adequate diet.
2. Every year for over 50 years, we have produced more food per person than in the past, even though population is growing.
3. People are still hungry and children die from malnutrition: the food does not reach all the people who need it.
4. Hunger leads to illness and death, even in cases where people do not starve.

5. It is not technically possible to redistribute food from those who have more than enough to those who do not have enough.

Population

1. Many of the poorest parts of the world have the highest population growth rates.
2. Every developed country has gone through a demographic transition, in which people choose smaller family sizes.
3. We understand most of the drivers of this transition and can even accelerate the process.

Agriculture

1. Agriculture is both the largest source of income for most of the world's poor and their most direct source of food.
2. Agricultural productivity responds to technical innovation in the same way that airplanes, automobiles, and computers respond to innovation.

Big Picture

1. From what we know of the world food system now, we have a narrow window to bring reasonable prosperity to the vast majority of the world's population and to create a sustainable future for the world's citizens.

Policies

Participation

10% of your grade will be allocated to participation. All classes will be in-person OR (in case we move online) synchronous, but recordings will be uploaded on the course website. Your participation grade is a combination of: (a) attendance in class (b) questions and comments in class (c) interaction with TAs.

Respectful Behavior

All communication with the instructor and other members of the class must meet obvious standards for respectful behavior. This applies to Zoom, all UMD email accounts, and on Slack. Any communication with the instructor or other students on any of these formats is subject to review and sanction. If you have any doubts about respectful behavior, please see: <https://svp.umd.edu/keepsteaching/security-privacy>. If you have any complaints, please email the instructor. I will do my best to resolve problems that can be resolved, but harassment must be reported to the University.

Integrity

Exams are open-book and open-notes. On exams you may not seek, accept, or provide any assistance (whether from members of the class or others), and all writing must be your own.

We will review expectations for how to take exams closer to each exam date. Plagiarism (whether from the internet or from fellow students) will result in a referral to the Honor Board. Communicating with other students during an exam will result in a referral to the Honor Board and an automatic XF for the full class.

Absences

Every class meeting has an associated participation grade. If you are worried you will miss more than ten classes and you have a valid excuse, you need to talk to the instructor immediately or as soon as you discover that you have a foreseeable attendance issue.

Exceptions

As a general rule, you are required to attend class. Exceptions to these attendance policies are:

1. if you are in a time zone outside these parameters;
2. if you are participating in a college-listed religious holiday;
3. if you are ill;
4. if you are taking care of a family member.

If any of these situations arises for you, please contact your assigned TA prior to class to let them know.

AI Policy

The University of Maryland provides guidance on the ethical, responsible, and transparent use of generative artificial intelligence (GenAI) tools in academic settings (see UMD Guidelines for Use of Generative AI). In this course, students should assume that the use of GenAI tools to complete assignments, problem sets, projects, or exams is **not permitted unless explicitly stated otherwise**. Any work submitted for this course must reflect the student's own thinking and understanding. While GenAI tools may be used in limited ways as a general learning aid (for example, to clarify concepts or explore practice questions), such use does not replace the responsibility to engage directly with the course material, and students remain fully accountable for the content they submit. Unauthorized or undisclosed use of GenAI tools will be treated as a violation of the University's academic integrity policies.

Class Format

Levels of instruction

Each week will comprise two classes:

- **Tuesday lecture:** The full class will meet every Tuesday. In this class, I will cover the material for that week. Participation is graded.
- **Thursday lecture & discussion:** The full class will meet every Thursday. We will (i) cover any carry-over material from Tuesday and (ii) review and discuss specific

topics from the previous week. The material reviewed will often rely on problem set responses and feedback from students to the TAs.

Things to do:

- Reading quizzes
- Problem sets
- Exams (see below)
- Participation
- Group project (see below)

Flow of activities

- **Pre:** usually the week before a topic
 - Reading
 - Reading quizzes
- **During:** the week of a topic
 - Lectures (in-person OR synchronous Zoom, but also recorded)
- **Post:** the week after a topic
 - Problem sets. Problem sets are due at 11:59 PM on the stated deadline.
 - Full class discussion of the previous week's material (typically Thursdays).

Grades

Graded Material

- Reading quizzes (weekly)
- Problem sets (five over the semester)
- Group project (one project, presented over two class meetings)
- Exams (three in-class exams on Thursdays)
- Participation (ongoing)

Grading

The class is graded over points earned through exams, assessments, and participation.

- **Exams (40%)** There will be three one-hour exams during the term. Each exam is worth 20%, and I drop the lowest of the three. Exams are **paper-based and in-class** (Thursdays as listed in the schedule). Exams are open-book and open-notes; **no communication and no assistance** is permitted during the exam.
- **Problem sets (15%)** There will be five problem sets over the course of the semester.
- **Group project (15%)** The course includes a group project designed to encourage deeper engagement with key debates around food, hunger, population, and agricultural policy. Students will work in groups of up to five to develop a clear, focused argument on a specific issue, with an emphasis on identifying something that is counter-intuitive, commonly misunderstood, or contested. The project will be assigned before Spring

Break, allowing groups time to form and to begin thinking about their topic as the course progresses. Final written projects will be due on Thursday, April 16. In the final weeks of the semester, groups will present and defend their arguments during structured in-class sessions involving short presentations and peer questioning. The purpose of the project is not to arrive at a single “correct” answer, but to practice making, articulating, and defending a coherent, evidence-based claim in dialogue with others.

- **Reading quizzes (20%)** A weekly quiz of the assigned readings for that week. Quizzes are due on Tuesdays by 1:00 PM (except the first week of class, where the quiz will be due on Friday, Jan 30 at 11:59 PM). No late submissions are allowed. Grade calculation will drop the lowest two quizzes.
- **Participation (10%)** TAs will grade participation based on attendance and participation (including communicating questions and comments during and beyond class). I will take attendance on eight randomly selected classes throughout the semester. Showing up present in five is a necessary condition for a full participation score.

Grading Scheme

Course Points	Course Grade
≥ 97.0	A+
93.0–96.9	A
90.0–92.9	A-
87.0–89.9	B+
83.0–86.9	B
80.0–82.9	B-
77.0–79.9	C+
73.0–76.9	C
70.0–72.9	C-
67.0–69.9	D+
63.0–66.9	D
60.0–62.9	D-
< 60.0	F

Schedule (Tentative; Topics Subject to Change)

- **Week 01 (week of 01/26; classes 01/27 & 01/29):** Ch 1–2. Introducing the course (Introductions; syllabus review)
- **Week 02 (week of 02/02; classes 02/03 & 02/05):** Ch 3–4. Defining and measuring undernutrition
- **Week 03 (week of 02/09; classes 02/10 & 02/12):** Ch 5–6. Consequences of undernutrition
Problem Set 1 due: Fri 02/13, 11:59 PM
- **Week 04 (week of 02/16; classes 02/17 & 02/19):** Ch 7. Some fundamental economic concepts

- **Week 05 (week of 02/23; classes 02/24 & 02/26):** Ch 8 & 10. Malthusian theory; demand for food
Exam 1 (in class, paper-based): Thu 02/26
Problem Set 2 due: Fri 02/27, 11:59 PM
- **Week 06 (week of 03/02; classes 03/03 & 03/05):** Ch 9. The problems of poverty and prosperity
- **Week 07 (week of 03/09; classes 03/10 & 03/12):** Ch 11–12. Environment and climate change
Group project assigned (this week)
Problem Set 3 due: Fri 03/13, 11:59 PM
- **Week 08 (week of 03/16; no classes):** Spring Break
- **Week 09 (week of 03/23; classes 03/24 & 03/26):** Ch 13. New technologies
Problem Set 4 due: Fri 04/03, 11:59 PM
- **Week 10 (week of 03/30; classes 03/31 & 04/02):** Ch 14–15. Thinking through food policy
- **Week 11 (week of 04/06; classes 04/07 & 04/09):** Ch 16–17. Alleviating poverty; population policy
Exam 2 (in class, paper-based): Thu 04/09
- **Week 12 (week of 04/13; classes 04/14 & 04/16):** Ch 18. Challenges of pricing and redistribution
Group project due (all groups): Thu 04/16
Problem Set 5 due: Fri 05/01, 11:59 PM
- **Week 13 (week of 04/20; classes 04/21 & 04/23):** Ch 19. Investing in productivity
Thu 04/23: Group project presentations (Day 1)
- **Week 14 (week of 04/27; classes 04/28 & 04/30):** Ch 20. The future of world food supply and demand
Thu 04/30: Group project presentations (Day 2)
- **Week 15 (week of 05/04; classes 05/05 & 05/07):** Recap (Tue 05/05)
Exam 3 (in class, paper-based): Thu 05/07

Zoom-related Norms (in case we shift to Zoom)

1. Rename your UMD Zoom ID to your full name so everyone can see it during meetings.
2. You are encouraged to keep your video on during class (except for brief breaks) to facilitate discussion and engagement.
3. Log on a few minutes early to ensure that everything is working as it should (technology-wise): check your mic, audio, and video options.
4. Mute your mic when you join the meeting and only unmute when you speak.

Housekeeping

1. You can add your preferred pronouns on ELMS: go to settings/pronouns.

2. You can also use the NameCoach feature on ELMS to record the pronunciation of your name.

IMPORTANT: Email policy

I will respond to emails as promptly as I possibly can, but I encourage you to write to your TAs first. With nearly 300 students, I simply cannot respond to each of you individually and in time. This is why we have developed a system where the TAs will be your first point of contact for every issue. Do communicate with them freely. They will try and solve your problems and escalate any issues that they feel require my attention.