Diet and Global Climate Change
2016 Spring Quarter
Environmental Studies 166 DC, UC Santa Barbara

Lecture: TR 9:30-10:45 am, HYCH 1902
Discussion sections: R 3:00-3:50 HSSB 3201, R 4:00-4:50 HSSB 4202, F 8:00-8:50 HSSB 4202
Class websites: http://www.es.ucsb.edu/faculty/cleveland/Courses/dcc/dccintro.htm (Reading assignments, etc.);
https://gauchospace.ucsb.edu/courses/ (Section assignments, grades, etc.)

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hours: Env Studies 4019 (floor 4L, Bren bldg), Thursdays 11-12:50, and by appointment.
Teaching Assistant: Sarah Antonelli; Email: santonelli@umail.ucsb.edu (put “Diet&Climate” in subject line of all emails).
Office hours: Env Studies 4010 (floor 4L, Bren bldg), Wednesdays 12:30 – 2:20 pm and by appointment.

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1. INTRODUCTION

The Neolithic strategy of supporting increasing human population and consumption by diverting more and more resources and energy from natural cycles has seemingly been viable for +12,000 years. It has also contributed to the Anthropocene epoch of massive human effects on the environment, including the climate.

A basic assumption of this course is that anthropogenic global climate change (GCC) is the biggest threat to the living Earth as humans and many other species have known it. It is highly probable that if humans and many other species are to survive much beyond the next century, we will have to mitigate anthropogenic GCC. We need new approaches that reduce our total impact. It requires thinking beyond the Neolithic. What about our diets?

“Diet” in this course means the combination of foods habitually eaten by individuals and populations. Diets vary by type, e.g. omnivore, vegetarian, or vegan, and quantity and quality of nutrients contained, and by their journey to your plate, e.g. foods can be local v. non-local, processed v. unprocessed, organically v. conventionally grown, fair trade or not, grown on small or large farms, and grown by workers treated justly or not, etc.

The major questions we will address in Diet and Global Climate Change class are: (1) How are diets and foods causally related to greenhouse gas emissions (GHGE) upstream in the agrifood system (e.g. the emissions generated by growing, processing, packaging, transporting, and preparing the food eaten, and the food wasted)? (2) How are diets and foods causally related to health, and the GHGE downstream in the health system (for example the emissions generated by the consequences of malnutrition, including health care and loss of productivity)? (3) How are the foods eaten causally related to individual knowledge and values, food environments, advertising, the structure and control of the food system, corporate and government policies? (4) How are food justice and climate justice related? (5) How can the answers to the first four questions help to motivate individuals, communities, and policy makers to change diets to improve nutrition and health, avoid catastrophic climate change, and promote food and climate justice?

2. INTELLECTUAL PROPERTY STATEMENT
All course materials (class lectures and discussions, handouts, examinations, web materials) and the intellectual content of the course itself are protected by United States Federal Copyright Law, the California Civil Code. The UC Policy 102.23 expressly prohibits students (and all other persons) from recording lectures or discussions and from distributing or selling lectures notes and all other course materials without the prior written permission of the instructor (See http://policy.ucop.edu/doc/2710530/PACAOS-100). Students are permitted to make notes solely for their own private educational use. Exceptions to accommodate students with disabilities may be granted with appropriate documentation. To be clear, in this class students are forbidden from completing study guides and selling them to any person or organization. [This text has been approved by UC General Counsel.]

3. REQUIREMENTS

This syllabus is a contract between you (each individual student) and the instructor of this course. By registering for this course you agree to the requirements and terms stated here. These requirements may be modified or supplemented later in minor ways; you are responsible for adhering to those changes, which will be announced in class.

3.1. Academic integrity

No form of academic dishonesty is tolerated in this course. ***This includes using another student’s i-clicker in class, giving your i-clicker to another student to use in this class, or any other form of cheating or plagiarism on homework assignments, quizzes or the final exam. ***The penalty for any form of academic dishonesty may include being dropped with an “F” from the course. In addition, any student who has the bad judgment to do any of these things will be reported to the Office of Academic Integrity. The UCSB Office of Academic Integrity (http://judicialaffairs.sa.ucsb.edu/AcademicIntegrity.aspx) has resources defining academic integrity and the procedures for dealing with academic dishonesty.

3.2. Required attendance

Attendance is required in all lectures and discussion sections.

3.3. Computer and internet access and competency

The main website for this class is http://www.es.ucsb.edu/faculty/cleveland/Courses/dcc/dccintro.htm. It is restricted beyond the homepage and Syllabus to current students; I will give you the user name pass word during the first lecture. Access to and use of the internet for this class is required. This includes checking for updated weekly assignments, and checking your UCSB U-Mail account daily. The Gaucio Space website for this class will be used for section assignments and grades.

Some of the readings listed in the Syllabus will change, and updated weekly assignments will be posted on the class website. Updates to the syllabus will also be announced in class, and you are responsible for these.

Access to and use of computers and MS Office software are required for this course. Computers and a printer are available for student use in the Environmental Studies Conference Room, Bren 4016.

According to the Registrar, “U-Mail is the official student e-mail service used by instructors and University administration. All students are required to activate and maintain (e.g. make sure it is not over quota) their U-Mail accounts for the duration of their academic career at UCSB. If you choose to forward your U-Mail to another e-mail provider you are required to check and maintain that account.” If you have any trouble logging into the class websites or accessing linked resources from these websites, let us know immediately.

3.4. Critical analysis guidelines (CAG)
The critical analysis guidelines (CAG) will be used throughout the course as the framework for analyzing readings, lectures, and discussions in your sections. Therefore, you should be sure to resolve any questions you have about them during the first weeks of the quarter.

3.5. Lectures and readings

Lecture/discussions will be based on the assumption that you have done the required reading by the date listed on the syllabus. All readings will be available via the class website in electronic form. If you have not done the readings, it will be difficult for you to understand the lectures or do well the quizzes. The purpose of the lectures is to explore the important concepts of the course interactively, not to deliver-receive information passively. To facilitate this, students are required to attend lectures and participate, and factual information will be available in readings and posted lectures.

When lectures include PowerPoint presentations, the PDF of most lecture slides will be posted on the course website after each lecture. Not all material presented in class will be included in the posted lectures, and some lectures will not use slides for some or all of the presentation.

**Attendance in lectures is required** and will be recorded via your use of your i-clicker to answer questions in class. You can miss up to a maximum of three lectures with i-clicker sessions without it negatively impacting your grade for lecture attendance; however, you are responsible for all material presented in lectures even when you cannot attend.

All readings for this class will be available for reading and downloading on the class website. Most of the readings are chosen from the professional literature and require critical concentrated attention, i.e. they are not popular summaries. We will sometimes ask you to read only selected parts of reading, so be sure to check the assignment.

Skim quickly through each reading to get the main points, and how the reading relates to lectures and discussion sections. Then read it again more carefully and write a summary using the relevant parts of the Critical Analysis Guidelines (CAGs). Writing a structured answer will help you remember the material for the quiz, and will often bring out new questions as you think about the material. Bring those questions to lecture and section! Be sure you understand the big picture for each article.

In order not to disturb other students, you need to arrive before the beginning of lecture, and stay until the end of the lecture. Do not pack up until the lecture is over. I encourage you to participate in the lectures by asking questions and contributing your knowledge to discussions when they take place.

**Use of laptop computers and other electronic devices is not permitted in lectures**, because their use disrupts the class. Turn off all computers, cell phones, iPods, MP3 players etc. during lecture. Students using these devices during lecture may receive a zero for one of the quiz grades. Exceptions for using laptops can be made in special documented circumstances, such as note-taking for the DSP. Success in this class will not be a result of your recording every word spoken during lecture, but rather, of jotting down main concepts on paper, engaging in lecture discussions, and understanding the interaction between assigned readings and lecture topics. This is your class too, so let’s work together to make it a great learning experience—please do not hesitate to ask students who are disruptive to be considerate of the rest of the class.

3.6. Discussion sections

Discussion sections will be integrated with the lectures, and your attendance, participation and assignments in your discussion section will be evaluated by your TA, and are worth 35 points per week for weeks 2-9 for a total of 280 points (see Discussion Syllabus for break down of points). Since no laptops are allowed, required readings should be printed out and brought with you to the sections they are assigned for.

You will be evaluated on (1) your ability to discuss reading assignments and answer questions in class, (2) written homework, and (3) individual and group presentations, both scheduled and spontaneous. Completing the reading and attending the lectures is necessary for successful participation in discussion sections.

You must register for one of these sections to take this class, and **YOU ARE REQUIRED TO ATTEND THE SECTION YOU ARE REGISTERED FOR**—If you do not, you will not receive credit for that section. All sections will meet the first week of classes and students who are registered but do not attend **WILL BE DROPPED**.
3.7. Quizzes and final exam

The best way to prepare for the quizzes and final exam is by 1) taking notes during ALL lectures, discussion sections, and on ALL readings, 2) using these notes to answer the questions in the CAG, 3) asking questions and participating in the lectures and discussion sections, and 4) contacting the instructors outside of class if you have any remaining questions. Quiz and exam questions will be a mixture of multiple choice, short essays and long essays, and will be based on the readings, lectures and discussion sections. Multiple choice questions will ask you to identify the one answer that is MOST FALSE. You are responsible for all material from the last quiz up to the point of the current quiz, which may include some readings assigned for the day of the quiz. There is also an extra credit option—see website.

The in-class quizzes and the final exam will not be given early, and make-ups will be given only in documented cases of emergency. This includes students participating in intercollegiate and club sports. Check your academic, athletic and social schedules for the quarter, and make sure there are no conflicts. This includes planning your class schedule so that your finals do not conflict and so that you do not have too many finals on one day—if you have a conflict, talk to your instructors NOW to see if arrangements can be made, or drop this course.

3.8. Final exam

THE FINAL EXAM WILL NOT BE GIVEN EARLIER OR LATER THAN SCHEDULED, SO CHECK YOUR ACADEMIC, ATHLETIC AND SOCIAL SCHEDULES FOR THE QUARTER, AND MAKE SURE THERE IS NOT A CONFLICT. This includes planning your class schedule so that your finals do not conflict and so that you do not have too many finals on one day. If you have a conflict, discuss with class instructors now to see if arrangements can be made, or drop this course.

From the Registrar about Final Exam schedule: “According to Academic Senate policy, instructors are not authorized to change these times without prior Academic Senate approval. Students can personally contact the chair of the department about any hardship they experience from a change in the final exam schedule. Contacting the Undergraduate Council is also an option. Any such appeals should be made prior to taking the exam.”

3.9. Written assignments

All written work, including the introductory essay and homework assignments for your sections, must follow the format described here. It must be in 8.5 x 11 inch format, single-spaced, with one inch margins on all four sides, using 12 point font such as Times New Roman, Arial or another standard font. Put your name, course number, and date in the upper right hand corner of the first page, and your last name and page number in the upper right hand corner of each subsequent page.

Some assignments will be submitted electronically via the class Gaucho Space website. Assignments to be handed in as paper copies must be machine printed, stapled in the upper left hand corner. Papers that are difficult to read because of poor printer quality will not be accepted. To conserve paper, you can print on both sides of the paper, or reuse paper that has one side previously used, as long as your assignment is clearly legible.

ALL WRITTEN ASSIGNMENTS ARE DUE AT THE BEGINNING OF YOUR SECTION ON THE DAY THEY ARE DUE. ASSIGNMENTS TURNED IN AFTER THE BEGINNING OF CLASS WILL BE CONSIDERED ONE DAY LATE. ASSIGNMENTS WILL BE MARKED DOWN ONE LETTER GRADE FOR EACH DAY THEY ARE LATE.

3.10. Introductory essay

This essay is worth 20 points, and is due at the beginning of your discussion section in Week #2. It should be 600 words maximum, double spaced, and answer the following questions in sections numbered 1 to 14 as below. Follow the format under “Written assignments” above.

1. What is your definition of “diet”?
2. What did you eat last night? Was this the same or different than your typical evening meal before you left your family home? Why or why not?
3. In what other ways has your diet changed, or not, since leaving home? Why?
4. What are your favorite foods?
5. What are the main criteria you use in choosing what foods you eat? (e.g. cost, taste, familiarity/comfort, availability, environ impact?)
6. What is your definition of “anthropogenic global climate change (GCC)”?
7. Do you think that anthropogenic GCC has affected your life to date? Explain why you think this.
8. How do you think that diet could affect GCC?
9. What is the basis for your opinion?
10. Why are you taking this course?
11. What do you expect to get out of this course, and how do you hope to apply it in the future?
12. What grade do you expect to receive and what work do you expect to do to receive it?
13. What is your major at UCSB? How is this course related to your major, and to other courses you have taken at UCSB and elsewhere?
14. Have you read the Syllabus for this course?

3.11. Extra credit

• Identify a substantive Diet and Global Climate Change related event in our campus or local community that you would like to attend, and have your TA approve it, by the end of week #9 at the latest.
• Attend the event and take notes.
• Write a substantive critical analysis of this event incorporating material you are studying in Diet and Global Climate Change.
• Word limit: 1000 words.
• Follow the CAG (Critical Analysis Guidelines), numbering sections of your critique 1-10 accordingly (not all guidelines will apply to each event).
• Grade (0-25 points) depends on quality of content and writing, which should reflect what you are studying in this class.
• Can be turned in up until Week 9 in your section. Extra credit assignments turned in after this time will NOT be accepted.

4. GETTING HELP

If you are having difficulty understanding any of the material in this course, please come to our office hours or schedule an appointment immediately! Bring your notes on the lectures and readings, including your CAG outlines for topics you want to discuss.

In addition, a wide range of services are available at UCSB to support you in your efforts to meet course requirements.

• Disabled Students Program (DSP): (893-2668, www.sa.ucsb.edu/dsp) DSP provides academic support services to eligible students with temporary and permanent disabilities. Please let us know if you require special classroom accommodations due to a disability. You must register with DSP two weeks prior to receiving these accommodations, so if you are going to register do it at beginning of quarter.
• Campus Learning Assistance Service: 893-3269. CLAS helps students increase their mastery of course material through course-specific tutoring and academic skills development. Check out the tutorial groups and drop-in tutoring schedules posted on the web site: www.clas.ucsb.edu. Sign up for services at the CLAS main office, SRB 3210, open 8-5 daily, closed noon – 1 pm for lunch.
• Counseling & Career Services: (893-4411, www.counseling.ucsb.edu) offers counseling for personal & career concerns, self-help information and connections to off-campus mental health resources.
• Stress management and other psychological resources on campus: http://counseling.sa.ucsb.edu/MentalHealthPeers/StudentEdResources.aspx

5. STUDENT EVALUATION
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Evaluation will be based on your comprehension of all course material (assigned readings, films, lectures and discussion), on clearly organized writing and verbal presentations, and on your ability to apply these skills to using theory and data to creatively and convincingly tests your hypotheses.

As stated above, attendance in all lectures and discussion sections is required of all students. If you cannot attend you are still responsible for the material covered.

You will receive a “0” for any exam, paper or discussion section you miss. Assignments will be marked down one letter grade for each day they are late. The only exception will be for documented emergencies.

5.1. Schedule and point distribution

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>DATE GIVEN OR DUE</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture participation (i&gt;clicker)</td>
<td>Weeks 2-9</td>
<td>80</td>
</tr>
<tr>
<td>Discussion sections: written assignments and class participation (8 weeks @ 35 points per week)</td>
<td>Weeks 2-9</td>
<td>280</td>
</tr>
<tr>
<td>Introductory essay</td>
<td>Week 2, due in sections</td>
<td>20</td>
</tr>
<tr>
<td>Quizzes (4 quizzes, 100 points each, lowest grade will be dropped)</td>
<td>Weeks 3, 5, 7, 9</td>
<td>300</td>
</tr>
<tr>
<td>Final exam (comprehensive)</td>
<td>Tuesday, June 7, 8-11 am</td>
<td>320</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Extra credit</td>
<td>Due in your section by Week 9</td>
<td>25</td>
</tr>
</tbody>
</table>

5.2. Grading system

Your grade will be a result of your work and improvement during the course. Grading is not on curve. All students can earn an “A”, a “B” or a “C”…. or an “F”. Our goal is to help everyone work toward an “A”.

<table>
<thead>
<tr>
<th>POINTS EARNED</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>967-1000</td>
<td>A+</td>
</tr>
<tr>
<td>933-966</td>
<td>A</td>
</tr>
<tr>
<td>900-932</td>
<td>A-</td>
</tr>
<tr>
<td>867-899</td>
<td>B+</td>
</tr>
<tr>
<td>833-866</td>
<td>B</td>
</tr>
<tr>
<td>800-832</td>
<td>B-</td>
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<tr>
<td>767-799</td>
<td>C+</td>
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<td>733-766</td>
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</tr>
<tr>
<td>633-666</td>
<td>D</td>
</tr>
<tr>
<td>600-632</td>
<td>D-</td>
</tr>
<tr>
<td>0-599</td>
<td>F (Failure)</td>
</tr>
</tbody>
</table>

6. TENTATIVE COURSE SCHEDULE (check website every week for updates!)

Assigned readings are tentative. Check the course website for final assignments for each week. Where no pages are listed, read the entire selection. Complete reading prior to lecture, i.e., the readings posted beneath the lecture date should be completed prior to that lecture.

6.1. Part 1. What’s on your plate? The food system and the climate system

Week 1. Introduction

Tuesday, March 29. Overview of this course.

READINGS
Course Syllabus.
Critical analysis guidelines (CAGs).

**Thursday, March 31. What is GCC, and how can it affect diet?**

**READINGS**


**Thursday, Friday, March 31, April 1. Discussion sections.**

**Week 2. Climate change mitigation targets; Agrifood system, LCAs**

**Tuesday, April 5. How much do we need to mitigate GCC and what is the potential for diet change?**

**READINGS**


6.2. Part 2. The potential for diet change to mitigate GCC upstream: The agrifood system

**Thursday, April 7. LCA and the temporal boundaries of the agrifood system**

**READINGS**


**Thursday, Friday, April 7, 8. Discussion sections.**

**Introductory essay due**

**Week 3. LCA methods; Production inputs**

**Tuesday, April 12. LCA and the spatial and structural boundaries of the agrifood system**

**QUIZ #1**

**READINGS**

Thursday, April 14. What is the potential for diet change to mitigate GHGE from food production inputs?

**READINGS**


Thursday, Friday, April 14, 15. Discussion sections.

Week 4. Field production; Transport

Tuesday, April 19. What is the potential for diet change to mitigate GHGE from food production in the field?

**READINGS**


Thursday, April 21. What is the potential for diet change to mitigate GHGE from food transport?

**READINGS**


Thursday, Friday, April 21, 22. Discussion sections.

Week 5. Processing, packaging; Preparation

Tuesday, April 26. What is the potential for diet change to mitigate GHGE from food processing, packaging and storage?

**QUIZ #2**

**READINGS**


Thursday, April 28. What is the potential for diet change to mitigate GHGE via changes in food preparation?

**READINGS**


Thursday, Friday, April 28, 29. Discussion sections.
Week 6. Waste reduction; Nutrition, health & happiness

**Tuesday, May 3. What is the potential for diet change to mitigate GHGE via food waste reduction?**

**READINGS**


**VIDEOS**

Stuart, Tristram. The global food waste scandal. TED talk. (14 minutes).

6.3. Part 3. The potential for diet change to mitigate GCC downstream: Nutrition and the health care system.

**Thursday, May 5. What is the potential for diet change to improve nutrition, health, and happiness?**

**QUIZ 6.3**

**READINGS**


**Thursday, Friday, May 5, 6. Discussion sections.**

Week 7. Evolution of diet; Health care GHGE

**Tuesday, May 10. What are the evolutionary and physiological bases of the human diet?**

**VIDEO**


**READINGS**


**Thursday, May 12. How can diet change reduce GHGE in the health care system?**


**Thursday, Friday, May 12, 13. Discussion sections.**
6.4. Part 4. Implementing diet change to mitigate GCC: Motivation, social action, and policy

Week 8. Psychology of diet change; Diet change from bottom up

**Tuesday, May 17. What motivates people to change their food choices and diets?**

*READINGS*

*VIDEO*

**Thursday, May 19. What drives food choice and diet from the bottom up?**

*READINGS*

**Thursday, Friday, May 19, 20. Discussion sections.**

Week 9. Diet change from top down; Campus food policy

**Tuesday, May 24. What drives food choice and diet from the top down?**

*QUIZ #4*

*READINGS*

**Thursday, May 26. Campus food policy at UC and UCSB.**

*READINGS*

**Thursday, Friday, May 26, 27. Discussion sections.**

6.5. Part 5. Review and final exam

Week 10. Review

**Tuesday, May 31. Review first half of course.**

**Thursday, June 2. Review second half of course.**

**Thursday, June 2, 3. Discussion sections.**

Week 11. Final exam.
Tuesday, June 7. **FINAL EXAM, 8-11 AM, Psych 1902.**