UMBRA INSTITUTE
PERUGIA, ITALY

ENV/SUST/FSST 330 Sustainable Food Production in Italy
Course Syllabus
Fall Semester 2024

Instructor: Neto Leão, PhD
Credits: 3
Contact Hours: 45
Prerequisites: none
Class Meeting Days & Time: Mondays & Wednesdays, 12:30-2pm
Office Hours: By appointment via email. Meetings take place at Jitsi on Moodle
Course Type: Course with a Service Learning component
Course Fee: USD$180

Course Description

There are more than seven billion humans on the planet. and it is estimated that by 2050 the world's population will reach 9.1 billion (34% higher than today), each of whom need to eat every day: ever-higher food production is contributing to faster use of non-renewable fossil fuels and environmental degradation. Food production will need to increase by 70% to feed the larger and most likely more urban population.

What modes of food production and consumption may be viable, sustainable responses to this problem? What are some alternative models of food production? How are people responding to increasing inequalities relating to food availability?

This course focuses on the radical increase in food production over the last decades and the ecological and social problems it has created, as well as on some possible solutions: the organic movement, Slow Food, and the shift towards local food. We will cast a critical eye on these movements and analyse their ability to change the trajectory of the global food production system, which is rapidly heading for collapse.

Learning Outcomes and Assessment Measures

By the end of the course, students will be able to:

1. *understand* the contested concept of sustainability in different academic disciplines and its wider political contexts to better define the progress toward a sustainable society;
2. *contrast* the two major alternative methods of food production and distribution: the industrial food system versus the local food web;
3. *elaborate* the ecological impacts of these alternative food production/distribution methods;
4. *explore* different efforts for more sustainable food production in Italy
5. *integrate* experiential learning into classroom knowledge.

Course Materials

Readings

A course reader, including all the indicated readings, will be available. The course's Moodle site is the primary location for readings and assignments.

Assessment

Attendance	10%
Weekly Moodle Quizzes	10%
Course Journal	20%
Final Paper	30%
Service Learning Project	25%
End of Semester Community Engagement Presentations	5%

Grading

Students are reminded that it is their responsibility to note the dates of exams and other assignments. No alternative exam dates will be offered and professors are not required to give partial credit for any late work (they do so at their discretion: the Institute's default policy is no extensions and a zero for any work turned in late). Students who book travel when they have an exam or other assessment will have to change their plans or accept a zero. Letter grades for student work are based on the following percentage scale:

Letter Grade Range	Numerical Score Equivalent	Student Performance
A	93% - 100%	Exceptional
A-	90% - 92%	Excellent
B+	87% -89%	
B	83% - 86%	Superior
B-	80% - 82%	
C+	77% - 79%	
C	73% - 76%	Satisfactory
C-	70% - 72%	
D+	67% - 69%	
D	63% - 66%	Low Pass
D-	60% - 62%	
F	59% or less	Fail (no credit)

<u>Please note</u>: *decimal and centesimal numerals between 1-4 are rounded down while 5-9 are rounded up: e.g., expect 89.4 to be 89.0 while 89.5 to round up to 90.*

Course Requirements

Grades are based on a combination of participation, in-class assessments, project presentations, and exams.

Attendance (10%)   Attendance is an essential part of this course. You are allowed 2 unexcused absences per course without penalty, per Institute policy. If you attend all the other meetings, you will receive 10% for this part of your grade. There are no make-ups offered for attendance.

Moodle Quizzes (10%)   Students will be assigned one short quiz every Tuesday morning and will be open until the following Tuesday. Students can take the same quiz as many times as they want. The quiz will be on Moodle. The quizzes will assess the students' understanding of the readings and discussions for that week.

Course Journal (20%)   Students will need a notebook, which they will use as a personal space through which to reflect on course material and ideas. In-class assignments (e.g. summaries of assigned readings, analyses of primary sources, mental maps, reflections, predictive exercises) will be regularly scheduled and graded twice throughout the semester, i.e. before the mid-semester break (Week 6) and at the end of the course (Week 11). Each of these checks is worth 7% of your grade, for a total of 14%.

Final Paper (30%)   A 2,000-word paper on any topic covered in the course. The essay is an in-depth study based on sources beyond the reading list. The paper is graded on three different occasions according to the three specific stages of your writing process. See the full prompt on Moodle for more information.

Service Learning Project (25%)   Students will analyse the Fuori di Zucca (FdZ) producers to understand their operations, values, and goals, as well as get to know and analyse the organisational model of Fuori di Zucca (FdZ), its structure, mission, and goals. They will then develop proposals to better involve these producers in FdZ's organisational model and decision-making process. All proposals will be presented at a final event at FdZ.

End of Semester Community Engagement Presentations (5%)   During Special Academic Events Week, the class will present a 15-minute summary of the project experience to the Umbra community during the **Community Engagement Final Presentations on Wednesday, December 11.** Students will receive the guidelines and presentation order after the mid-semester break. Participation in this event is MANDATORY and an integral part of the community engagement grade.

Extension & Submitting Late Work

Work submitted after the deadline will receive a grade of zero, not partial credit. Each student is allowed one extension of 24 hours over the entire semester. This can be used for any assignment but the final project. Students need to email the instructor before the deadline and inform the instructor of their use of the extension. Any work submitted after the 24-hour extension will be marked zero. As for all policies, exceptions can be made by the Director for students with special accommodations or in case of medical emergencies, etc.

Attendance Policy

Attendance is expected and mandatory for classroom times and co-curricular activities. The first two absences per course due to illness will be considered excused "sick days" and do not require medical documentation. To receive additional excused absences due to illness, students are required to see a local physician or request a letter from an Institute-approved doctor documenting they should be excused from class for illness. Unexcused absences will adversely affect a student's academic performance and will result in a reduction of the student's final course grade by 2% per absence up to a maximum of 10%. Excessive unexcused absences may result in a failing grade or disciplinary action. It is the student's responsibility to be aware of the number of absences or late arrivals for each course, and to ask the instructor when in doubt.

If students miss class, they are responsible for obtaining class notes from other students and/or for meeting the professor during office hours. Any work missed in class because of an excused absence may be made up within one week of the return to the class. Any work missed that was a quiz or other test must be made up outside of class time and will, in the interest of intellectual honesty, be a slightly different test than the one given in class. Presence during mandatory field trips is especially important. Missing a mandatory field trip for a course, unless for a very serious reason that is communicated to Umbra staff in a timely manner, will lower the students' grade by half a letter grade (i.e., a final grade of a B+ would be lowered to a B).

Legitimate reasons for an excused absence or tardiness include death in the immediate family, religious observances, illness or injury, local inclement weather, and medical appointments that cannot be rescheduled.

Absences relating to illness may be excused by the Director, but only if a medical certification is provided. Students who request an approved absence to observe a religious holiday must submit a formal request to the Institute's Director within one week after the add/drop period when course schedules, including any field trips, are finalised. No exceptions will be made after this deadline.

Except in the case of medical emergencies, absences are not accepted when tests are scheduled; tests cannot be made up. Furthermore, scheduled times and dates indicated for exams, quizzes, oral presentations, and any other graded assignments cannot be changed for any reason. Even if more sections of the same class are activated, students may only take exams during the scheduled times and dates for the section they are enrolled in.

Tardiness Policy

Students are expected to attend all classes punctually. Any student arriving up to 15 minutes late or leaving up to 15 minutes earlier than the scheduled class end time will be marked as tardy. Each incident of tardiness (late arrivals to or early departures from class) is 0.5% off the final grade. However, should a student arrive more than 15 minutes late or depart more than 15 minutes before the conclusion of the class, it will be recorded as an absence.

Students are also expected to remain in class during the time of instruction except for a reasonable amount of time to use the restroom. Students who leave class and do not return during the class session will receive an unexcused absence or late penalty.

Academic Integrity

All forms of cheating (i.e., copying during exam either from a fellow student or making unauthorised use of notes) and plagiarism (i.e., presenting the ideas or words of another person for academic evaluation without acknowledging the source) will be handled according to the Institute Academic Policy, which can be found in the Umbra Institute Academic Policies and Conduct Guidelines.

Utilising ChatGPT or other artificial intelligence (AI) tools for the generation of content submitted by a student as their own as part of any assignment for academic credit at the Institute constitutes a form of plagiarism. Should the Institute become aware of a student's use of such platforms and services, the student will be subject to the same consequences and judicial proceedings as are in place for plagiarism (defined above).

Classroom & Laptop Policy
Students are expected to follow the policy of the Institute and demonstrate the appropriate respect for the historical premises that the school occupies. Please note that cell phones must be turned off before the beginning of each class. Computers and other electronic devices cannot be used during class lectures and discussions.

Laptop/Smartphone Policy
    An ever-increasing body of research shows that open laptops and telephones in the classroom create distraction (both visual and auditory) for those using them and those around them. You can type faster than you can write, and as a result you end up processing less when you're simply typing notes. For this reason, students are asked to keep computers and phones away and use a regular notebook. There are four exceptions: 1) if you have a vision or other accommodation; 2) if you are using a tablet to take notes, one which is not connected to the internet; 3) if we have an in-class tutorial about online research tools; or 4) if you make an office hours appointment with me to discuss the use of a computer.

U.N. Sustainable Development Goals
 This course contributes to the achievement of one or more goals of U. N. Agenda for Sustainable Development

During this week the Community Engagement Team will stop by the class to introduce the Service Learning Project

Introduction to the Course
Meeting#1: In this first class, the instructor will explain the structure of the course. Introduction on "What is sustainability?"

Meeting#2: What is sustainability? There is no universally agreed definition of what sustainability means. Today the class will explore the different views on what it is and how it can be achieved.

Readings for the week:
Heinberg, Richard. "What Is Sustainability?" In *The Post Carbon Reader: Managing the 21st Century's Sustainability Crises*, edited by Richard Heinberg and Daniel Lerch, 13–20. Healdsburg, CA: Watershed Media, 2010.
Dillard, Jesse, Veronica Dujon, and Mary King. "Defining Social Sustainability." In *The Post Carbon Reader: Managing the 21st Century's Sustainability Crises*, edited by Richard Heinberg and Daniel Lerch, 21–24. Healdsburg, CA: Watershed Media, 2010.
How Does Sustainable Agriculture in Italy Yield High Quality Food? *CarbonCraft Blog*, 2020

Understanding & Contrasting Sustainable Development and Conviviality
Meeting#3: In 2015, countries adopted the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals. The class will discuss what businesses, governments, and people are doing to achieve the Goals. Has sustainable development become an advertising slogan for "green" economic growth? We will discuss the energy crisis through the lenses of conviviality.
Service Learning Project: In-class presentation by CE team of the service learning project

Readings:
Marques, Luiz. Unsustainability and the Increasing Severity of Environmental Crises. From *Capitalism and Environmental Collapse*. Switzerland: Springer, 2020.

Meeting#4: The definition of "sustainable food" has to include a social justice component in a globalised world economy.

Readings:
Sandler, Ronald L. "Food Systems" pp.4-30 in *Food Ethics: The Basics*. 1 edition. London; New York: Routledge. 2014.

Life Cycle Assessment
Meeting#5: Introduction lecture on Life Cycle Assessment (LCA). LCA is a methodology that provides a way of assessing the environmental impact associated with the whole life cycle of a product or service. The concept of Life-Cycle Assessment (LCA) and the true food miles (and carbon footprint) of "local" foods will be introduced.

Readings:
Mariola, Matthew J. "The Local Industrial Complex? Questioning the Link between Local Foods and Energy Use." *Agriculture and Human Values* 25, 2: 193–96, 2008.
Daniela Lovarelli, Luciana Bava, Maddalena Zucali, Giuliana D'Imporzano, Fabrizio Adani, Alberto Tamburini & Anna Sandrucci (2019) Improvements to dairy farms for environmental sustainability in Grana Padano and Parmigiano Reggiano production systems, *Italian Journal of Animal Science,* 18:1, 1035-1048

Meeting#6: The class will explore LCA calculations of an Italian Lager Beer.

Readings:
    Cordella, Mauro, Alessandro Tugnoli, Gigliola Spadoni, Francesco Santarelli, and Tullio Zangrando. "LCA of an Italian Lager Beer." *The International Journal of Life Cycle Assessment*, 13:133, 2009.

Local Food, Organic Food, Farmers Markets

Meeting#7: What is the history of organic food production and labelling? This week we will discuss the positive aspects of organic agriculture, but will also offer a critique of the "supermarket pastoral" around "natural" food.

Readings:
    McWilliams, James E. "Food miles or Friendly miles?: Beyond the "Farm to Fork" paradigm of production. From *Just Food: Where Locavores Get It Wrong and How We Can Truly Eat Responsibly*. New York: Back Bay Books, 2010.
    Lockeretz, William. 2007. "What Explains the Rise of Organic Farming?" In *Organic Farming: An International History*, edited by William Lockeretz, 1–8. Wallingford and Cambridge: CABI.
    Scialabba, Nadia El-Hage. 2007. "Foreword" In *Organic Farming: An International History*, edited by William Lockeretz, ix/xi. Wallingford and Cambridge: CABI.

Meeting#8: Visit to the Orto di San Matteo degli Armeni

Visit to FdZ headquarters from 6.30 pm to 7.30 pm. An email will be sent by Manuel with timing and location.

Service Learning Project: Field trip to FdZ Producers on **Friday, October, 4th**. A detailed itinerary will be sent early this week.

Urban Agriculture

Meeting#9: Can the countryside and the city grow to be closer? Today, we will rethink the relationship between urban dwellers and their source of food. Can cities become more sustainable by growing food?

Readings:
    McClintock, Nathan "Radical, Reformist, and Garden-Variety Neoliberal: Coming to Terms with Urban Agriculture's Contradictions." *Local Environment* 19(2): 147–171.2014

Meeting#10: Student group project: students should prepare a project of urban agriculture. The conceived project must be based on the Framework for Action of the Milan Urban Food Policy Pact.

Community engagement and Research day

Meeting#11: Research day: in class time to prepare the Outline for the Final Paper
Grading of the Course Journal #1

Meeting#12: Guest Lecturer: Domenico Lizzi. This class will introduce the Solidarity Purchasing Project with Fiori di Zucca.

Students have until Sunday 20th to turn in the outline of the final paper (see the full prompt on Moodle).

Semester Break

Genetic Modified Organisms:

Meeting#13: The lecture will explore what exactly is "genetic modification". Is GMO the benevolent technology Monsanto would have us believe it is, or is there something wrong about genetic modification and patenting life?

Readings:

Blagoevska K, Ilievska G, Jankuloski D, Stojanovska Dimzoska D, Crceva R, Nikolovska, and Angeleska A. "The controversies of genetically modified food." In *IOP Conference Series: Earth and Environmental Science*, 854, 1, p. 012009. IOP Publishing, 2021.

Meeting#14: The class will explore the science that surrounds GM food to understand what's at stake.

Readings:

Pellegrino, Elisa, Stefano Bedini, Marco Nuti, and Laura Ercoli. "Impact of Genetically Engineered Maize on Agronomic, Environmental and Toxicological Traits: A Meta-Analysis of 21 Years of Field Data." *Scientific Reports* 8,1: 3113, 2018.

WEEK 8

Climate Change, Food Security vs Food Sovereignty

Meeting#15: The growing temperatures are influencing agricultural productivity in correlation with the latitude. In this class, we will explore the risks associated with climate change and the strategies adopted to address this problem.

Readings:

Sgobbi, Alessandra, and Carlo Carraro. "Climate Change Impacts and Adaptation Strategies in Italy: An Economic Assessment." No. 2008, 6. Nota di Lavoro, 2008.

PWorld Health Organization. "Climate and Health Country Profile: Italy." United Nations. Accessed June 29, 2019.

Meeting#16: The documentary "*Kiss the Ground*" will be shown and discussed in class. The movie focuses on the practice of regenerative agriculture that has the potential to balance our climate, replenish our vast water supplies, and feed the world.

WEEK 9

From food waste to energy: a new Bio-Economy strategy for a sustainable Italy

Meeting#17: From waste to green energy: how food industry by-products become a resource that blends environmental and economic sustainability. It will discuss the BIT II (bioeconomy in Italy) document presented at the Italian presidency of Council Ministers in 2019.

Readings:

BIT II – Italian Bioeconomy strategy II (https://cnbbsv.palazzochigi.it/media/1774/bit_en_2019_02.pdf)

Fabio Fava, Lucia Gardossi, Patrizia Brigidi, Piergiuseppe Morone, Daniela A.R. Carosi, Andrea Lenzi. The bioeconomy in Italy and the new national strategy for a more competitive and sustainable country, New Biotechnology, 61, 2021,124-136.

Meeting#18: In this class, it will discuss the valorization of food waste in Italy as an attractive resource for some industries such as biogas, ethanol, and biodiesel as final products.

Readings:

Esra Uçkun Kiran, Antoine P. Trzcinski, Wun Jern Ng, Yu Liu. Bioconversion of food waste to energy: A review. *Fuel*, 134, 2014; 389-399.

WEEK 10

Research Week for Final Paper
Meeting#19: Research day
Grading of the Course Journal #2

Meeting#20: Service Learning Project - Check in with Domenico Lizzi (TBC)

Students have until Sunday 24th to turn in the 1000 words draft of the final paper (see the full prompt on Moodle).

<div align="center">WEEK **11**</div>

Agro-ecology, Agro-forestry and Meat Production
Meeting#19: This class will focus on the concept of agroforestry. How and where are major agroforestry methods practised in Italy? Are those methods practical?

Readings:
    Torralba, Mario, Nora Fagerholm, Paul J. Burgess, Gerardo Moreno, and Tobias Plieninger. "Do European Agroforestry Systems Enhance Biodiversity and Ecosystem Services? A Meta-Analysis." *Agriculture, Ecosystems& Environment* 230: 150–61, 2016.
    Paris, Pierluigi, Francesca Camilli, Adolfo Rosati, Alberto Mantino, Giustino Mezzalira, Cristina Dalla Valle, Antonello Franca et al.. "What Is the Future for Agroforestry in Italy?" *Agroforestry Systems*, 93, 2243–2256 (2019).

Meeting#20: The documentary "Cowspiracy" will be discussed. Students must watch it before class. This class will explore the impact of livestock production in the environment. We will also investigate the policies of several environmental organisations.

Readings:
    Hoekstra, A.Y. "The water footprint of animal products". pp. 21-30. From *The Meat Crisis*. London; New York, NY: Routledge. 2017.
    Lawrence, A. and Baxter E., "Sustainable pig production: finding solutions and making choices". pp. 171-185 from *The Meat Crisis*. London; New York, NY: Routledge. 2017.

<div align="center">WEEK **12**</div>

Food Activism and Slow Food
Meeting#23: From the beginning, Slow Food was a "political" food movement. Students will discuss Carlo Petrini's turning away from the mainstream left and creating the group that would become Slow Food. In addition, we will look at Slow Food's current stance and decide whether it is the blueprint for global sustainability.

Readings:
    Peano, Cristiana, Paola Migliorini, and Francesco Sottile. "A Methodology for the Sustainability Assessment of Agri-Food Systems: An Application to the Slow Food Presidia Project." *Ecology and Society* 19, no. 4 (2014).
    Laudan, Rachel. "Slow Food: The French Terroir Strategy, and Culinary Modernism. An Essay Review of Carlo Petrini, Trans. William McCuaig." *Food, Culture, and Society* 7, 2: 134–44, 2004.

Meeting#24: IN-CLASS FINAL PRESENTATION WITH THE PARTNER

Readings:
    Grasseni, Cristina. "Food Activism in Italy as an Anthropology of Direct Democracy." *Anthropological Journal of European Cultures* 23, 1: 77–98, 2014.

<div align="center">WEEK **13**</div>

Final Classes, Final Exams, & Special Academic Events Week

Final paper due: submission by Tuesday 10th

ENV/SUST/FSST 330 Sustainable Food Production in Italy
Syllabus Appendix
Fall Semester 2024

What is service learning?
Service learning is a type of experiential education integrated into a course such that:
- students engage in an organized activity or project aimed to address a community need that is identified in collaboration with the community partner;
- students critically reflect on the link between the experience in the community, course content, and the learning goals; and
- there is reciprocal learning both by the students and by the community partners.

Students will need a certain degree of flexibility, creativity, and self-initiative to realize a service learning project. Organization and open communication in-class with the professor and student team members will be key to student success.

Service Learning Project Overview

Community Partner
Fuori di Zucca (whose literal translation in English is "Out of Pumpkin" but whose meaning is "crazy") is a Volunteering Association that manages a Solidarity Purchasing Group. Its headquarters are located in the historical center of Perugia (next to University for Foreigners main building). The Association was founded in 2016 by a group of 5 people to create a small community that would buy fresh food (i.e., vegetables, fruit, cheese, etc.) in a conscious and alternative way. The purchase takes place according to the principle of solidarity, which leads them to prefer small and local producers, respectful of the environment and people, with whom they have established a direct and stable relationship.

Project Description and Goals
Students will analyse the "Fuori di Zucca" (FdZ) producers to understand their operations, values, and goals, as well as get to know and analyse the organisational model of Fuori di Zucca (FdZ), its structure, mission, and goals. They will then develop proposals to better involve these producers in FdZ's organisational model and decision-making process. All proposals will be presented at a final event at FdZ.

Organization, Expectations, and Roles
Students will be divided into teams, and they will choose their team. An important amount of time will be dedicated to the service learning project's progress in class. Teams might be required to meet outside of class for approximately 1–2 hours. Teams will be responsible for deciding how to divide the various tasks to ensure members contribute equally throughout the project.

Group Presentation
Each team will collaborate to create and present a final detailed presentation accompanied by a PowerPoint presentation. Each student will be expected to complete a Presentation Feedback Form and ask questions to the other teams presenting to promote a community of learning and support.
Guidelines:
- PowerPoint (spell-check!).
- 10 minutes.
- Each team member contributes to the preparation and delivery of the presentation.
- Rehearse presentation as a group for content, length, and transitions.

End of Semester Community Engagement Presentation

During Special Academic Events Week, the class will present a 15-minute summary of the project experience to the Umbra community during the Community Engagement Presentations on **Wednesday, December, 11th** (the final week of the program). Students will receive the guidelines and presentation order after the mid-semester break.

All the presentations will have the same structure:

1. Present the partner
2. Present the project
3. Takeaways & challenges
4. A meaningful activity in line with the course topics (**optional**, it doesn't have to take more than five minutes)

Participation in this event is mandatory and an integral part of the community engagement grade.

Grading Rubric

The service learning project (including the final presentation) is worth a total of 25% of the final course grade, which will be divided into three categories, each worth 8.33% of the final course grade:

1. Construction of learning project
2. Execution of learning project
3. End of Semester Community Engagement Presentation