

# HORT 3080 CT<sup>2</sup> Sustainable Landscape Garden Design, Installation, & Maintenance [2022]

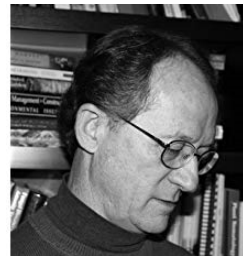
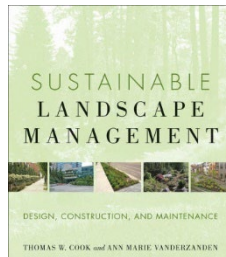
**Instructor:** Dr. Ellen Vincent,  
**Class:** P&A Room E-147 T, TH 9:30-10:45 AM  
**Contact:** 173 P&A  
Office hours: T/TH 8:00- 9:00 or by appointment  
Email: ellenav@clemson.edu

Photo by Craig Mehaffey



**Integrity Statement:** As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a 'high seminary of learning.' Fundamental to this vision is a mutual commitment to truthfulness, honor and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

**Honesty** is illustrated in a video: Author Chimamanda Ngozi Adichie addresses Harvard's Class of 2018:  
<https://www.youtube.com/watch?v=hrAAEMFAG9E>



<https://archive.inside.iastate.edu/2011/1215/celt.php>  
[https://www.amazon.com/gp/product/0470480939/ref=dbs\\_a\\_def\\_rwt\\_bibl\\_vppi\\_i0](https://www.amazon.com/gp/product/0470480939/ref=dbs_a_def_rwt_bibl_vppi_i0)  
<https://www.amazon.com/Thomas-W.-Cook/e/B00420E4FG>

## Required Texts

### (1) *Sustainable Landscape Management: Design, Construction, and Maintenance*

Thomas W. Cook and Ann Marie VanDerZanden (2011) College Bookstore or Electronic book download access at: [https://pascal-clemson.primo.exlibrisgroup.com/permalink/01PASCAL\\_CLEM/g45dlb/alma991014048313505612](https://pascal-clemson.primo.exlibrisgroup.com/permalink/01PASCAL_CLEM/g45dlb/alma991014048313505612)  
Students can download the work chapter by chapter in PDF and print it if they want a hard copy of the book-courtesy of Clemson University Cooper Library.

### (2) *The Sustainable Sites Initiative: Guidelines and Benchmarks 2009* (PDF download-Canvas)

American Society of Landscape Architects, Lady Bird Johnson Wildflower Center at the University of Texas at Austin, and United States Botanical Garden

## Optional: Ordering your textbook from Clemson Bookstore:

- 1) Go to [www.clemson.edu/bookstore](http://www.clemson.edu/bookstore)
- 2) Click on "bookstore services"
- 3) Click on "Student textbook reservation"
- 4) Click on the link that appears below it.
- 5) This link takes users to the site where students choose the course and section and books to order.

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## Sustainable Sites:

Holly Owings, MLA



<http://earthdesignsc.com/about/staff/>

Watt Center Green Roof



Lady Bird Johnson Wildflower Center



Photos by Ellen Vincent

## Critical Thinking:

Dr. Frank Fear



Author Chimamanda. N. Adichi



David Brooks



<https://www.lansingstatejournal.com/story/opinion/contributors/viewpoints/2018/02/04/fear-msu-needs-culture-change-and-end-elitism/300441002/>

<https://connectnigeria.com/articles/2015/11/baileys-prize-crowns-chimamanda-ngozi-adichie-as-its-best-of-the-best/>

<https://twitter.com/nytdavidbrooks>

## Critical Thinking Student Learning Outcomes

- (1) Explore complex challenges associated with sustainable landscape design, installation and maintenance.
- (2) Analyze sustainable design problems using multiple lenses and perspectives.
- (3) Extrapolate from one conceptual context to others in the sustainable landscape.
- (4) Develop creative solutions to complex challenges.
- (5) Communicate complex ideas effectively.

This class is a Clemson Thinks2 (CT<sup>2</sup>) seminar –developed to increase and enhance your critical thinking skills.

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## Goals of the CT2 Seminar

1. Students will develop university-level competence at the activities that characterize critical thinking.
2. Students will describe the specific activities that characterize critical thinking and will reflectively report on their own use of these tools.
3. Students will apply critical thinking skills to solve problems both within and that occur outside the academic classroom.

## What are critical thinking skills?

1. Determine the relevance of information for evaluating an argument or conclusion.
2. Recognize flaws and inconsistencies in an argument.
3. Evaluate competing causal explanations.
4. Evaluate hypotheses for consistency with established facts.
5. Determine whether an artistic interpretation is supported by evidence contained in the work.
6. Recognize the salient features or themes in a work of art (landscape design).
7. Evaluate the appropriateness of procedures for investigating a question of causation.
8. Evaluate data for consistency with established facts, hypotheses, or methods.

## Seminar Design

- 3 credit hours
- Required class for horticulture majors, other majors with a strong interest are welcome
- Common student learning outcomes for critical thinking and sustainable landscape design

## Teaching/Learning Strategies

Critical thinking skills will be promoted through modeling (classroom experience), personal experience/reflection (essays), discourse (group discussions), and vocabulary (tests).

## Critical Thinking Artifacts

- CT essays and surveys will be representative examples of students' critical thinking skills.
- Collective responses to selected CT questions from in-class exams will be submitted as artifacts.

## Assessment

**Writing:** Critical thinking visual essays and plant profile sheets will be due. See rubrics.

**Participation:** Active engagement in group discussions, group exercises, and class activities.

**Exams:** 3 in-class exams and one cumulative final exam.

The instructor *may* offer an option that allows the average of the in-class exams to be substituted for the final exam.

## Grading Scale

The following numerical system will be used to determine a letter grade for the zero credits of work experience:

90 – 100 = A

70 – 79 = C

0 – 59 = F

80 – 89 = B

60 – 69 = D

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## Grading:

Item	Qty	Points	Percentage
Essays/critical thinking	2	100 points each	20%
Plant profile sheets	2	100 points each	20%
Group oral presentation	1+	100 points	10%
Participation/engagement	Every session	100 points each	5%
Intro/exit surveys	2	100 points each	5%
Exams	4	100 points each	40%

The instructor *may* offer an option that allows the average of the first three exams to be substituted for the final exam.

**Timeliness Policy:** Assignments are due on the date/time specified. Time management is key to employment success. **Extended deadlines may be requested but should be negotiated with the instructor prior to the due date.** Unexpected obstacles (illness, power outages, etc.) may also be excused if documentation in some form is supplied. Each **unexcused late assignment** will result in a loss of 5 points per day from your grade. For example, an assignment that is submitted three days late will lose 15 points in addition to any other point loss.

**Attendance Policy:** Attendance is required at every class unless classes have been officially canceled by the University. **If you miss a class you are responsible for the material covered during that class. Excused absences include official hospital or Redfern documentation and official field trip documentation from other classes prior to the absence.** Four unexcused absences results in a loss of 5 points from your final grade. Five unexcused absences result in a loss of 10 points from your final grade. Six or more unexcused absences results in 20 points from your final grade.

**Clemson Policy During COVID:** For an absence to be considered excused, students are expected to use the Notice of Absence process to inform instructors of their inability to attend in-person classes due to isolation or quarantine.

**All special circumstances** (critical communications during class, arriving late to class, leaving early from class, etc) **should be negotiated with the instructor prior to the class.** Late arrivals and leaving early will be treated as absences unless previously negotiated with instructor.

**Assignment Citation Policy:** All work submitted for a grade must be your own, unless group work is assigned. All text included in assignments that was written by someone other than you must be correctly quoted and cited. All images included in assignments must be identified to Web page/author/artist. If you are the creator of the image, please cite your name.

**Positive engagement** is strongly encouraged in class. Please treat other people's views with respect and courtesy and allow your inquisitive mind to take precedent over your judgmental mind.

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**Computer/phone use in class** is permitted only for (1) note taking; (2) Powerpoint viewing; and (3) Internet pursuits of sites mentioned in class only. Anyone using the computer for other uses will lose permission to use the computer in class. Refrain from texting, emailing, or using your computer for unrelated work while in class. All legitimate conflicts requiring connectivity should be negotiated with the instructor prior to class to avoid confusion.

**Email Professionalism:** In the subject line of each email please be sure to **include the course number and an accurate and current subject topic**. Every email (especially with attachments) should contain a **greeting, a sentence or two explaining the attachments, and a closure**. A **professional signature** should be used that includes your name, major, minor (if you have one), and class year.

**Clemson email address** should be checked at least once a day for potential messages dealing with this course. Do not forward your Clemson mail to another account (Yahoo, AOL, etc.) as those accounts tend to have issues like full in-boxes and limitations on attachments.

**Incident Weather:** When County government offices are closed, Clemson University campus is also closed.

**Accessibility Statement:** Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to this class should let the professor know and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing [studentaccess@lists.clemson.edu](mailto:studentaccess@lists.clemson.edu). Students who receive Academic Access Letters are strongly encouraged to request, obtain, and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: <http://www.clemson.edu/campus-life/campus-services/sds/>.

**Clemson University Title IX Policy (Sexual Harassment):** Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity (e.g., opposition to prohibited discrimination or participation in any complaint process, etc.) in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. The University is committed to combatting sexual harassment and sexual violence. As a result, you should know that University faculty and staff members who work directly with students are required to report any instances of sexual harassment and sexual violence, to the University's Title IX Coordinator. What this means is that as your professor, I am required to report any incidents of sexual harassment, sexual violence or misconduct, stalking, domestic and/or relationship violence that are directly reported to me, or of which I am somehow made aware. There are two important exceptions to this requirement about which you should be aware: Confidential Resources and facilitators of sexual awareness programs such as "Take Back the Night and Aspire to be Well" when acting in those capacities, are not required to report incidents of sexual discrimination. Another important exception to the reporting requirement exists for academic work. Disclosures about sexual harassment, sexual violence, stalking, domestic and/or relationship violence that are shared as part of an academic project, a research project, classroom discussion, or course assignment, are

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not required to be disclosed to the University's Title IX Coordinator. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Ms. Alesia Smith is the Executive Director for Equity Compliance and the Title IX Coordinator. Her office is located at 223 Holtzendorff Hall, phone number is 864.656.3181, and email address is alesias@clemson.edu.

Please contact me privately if you have special needs in this course.

## Sustainable Design, Installation, and Maintenance:

Joan Nassauer, MLA



Randy Hester, MLA



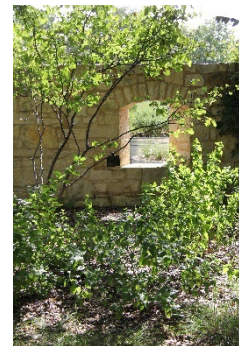
The High line, NYC



[http://seas.umich.edu/research/faculty/joan\\_nassauer](http://seas.umich.edu/research/faculty/joan_nassauer)

<https://www.pps.org/article/rhester> [https://en.wikipedia.org/wiki/High\\_Line#/media/File:High\\_Line\\_20th\\_Street\\_looking\\_downtown.jpg](https://en.wikipedia.org/wiki/High_Line#/media/File:High_Line_20th_Street_looking_downtown.jpg)

## Lady Bird Johnson Wildflower Center, Austin TX



Photos by Ellen Vincent

Gratitude is extended to **Lori Kinley/Clemson OnLine** for superb assistance updating/managing Canvas items; to **Dr. David Knox/Director for Clemson Thinks2** for repeated critical thinking professional training of faculty and students; to **Jeff Baker/Superintendent for Clemson Landscape Services** and **Tim Howard/Watt Center** for real world tours of sustainable landscape spaces on Clemson campus; to **Holly Owings/EarthDesign, Susannah Horton/City of Asheville Parks and Recreation Manager, Andrea DeLong-Amaya/Lady Bird Johnson Wildflower Center, and Dr. Sarah White/Clemson Horticulture/PES** for providing established sustainable landscape projects and practices to view and explore.



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[2022]

**Wearing masks in class is welcomed as a proven way to protect yourself and others from COVID transmission.**

Date	Class Item	Assignments/Required Readings
Aug 25 TH	Class overview: intro questionnaire, syllabus, Intro to Sustainability	<p><b>Intro survey due</b></p> <p>Read <i>Sustainable Landscape Management</i> chapters 1&amp;2 (pp.1-38)</p> <p>View Webpage “Sustainable Sites Initiative” and lightly review “Certification” at <a href="http://www.sustainablesites.org/">http://www.sustainablesites.org/</a> and “Certified SITES Projects” at <a href="http://www.sustainablesites.org/directory">http://www.sustainablesites.org/directory</a></p>
Aug 30 T	Sustainable Landscape Design	<p>Read <i>The Case for Sustainable Sites</i> (2009) (Canvas)</p> <p>View Webpage “Sustainable Sites Initiative” and read two articles posted at the bottom of the page or via the link at <a href="http://www.sustainablesites.org/">http://www.sustainablesites.org/</a></p> <p>View SITES Ratings System (Canvas) or: <a href="https://www.usgbc.org/resources/sites-rating-system-and-scorecard">https://www.usgbc.org/resources/sites-rating-system-and-scorecard</a></p>
Sept 1 TH	Critical Thinking Introduction	<p>Read Brookfield <i>Teaching for Critical Thinking</i> chapter 1 (pp. 1-25)</p> <p>Read Facione <i>Critical Thinking: What It Is and Why It Counts</i> (pp. 1-28)</p> <p>View Critical Thinking Community <i>Valuable Intellectual Traits</i> (Canvas)</p>
Sept 6 T	Principles of Design	Read Ingels “Principles of design” chapter 8 (pp. 139-159) in <i>Landscaping Principles and Practices</i> (Canvas)
Sept 8 TH	Sustainable Teams	
Sept 13 T	CT <sup>2</sup> : Danger of a Single Story CT2 essay	<p><b>Critical thinking essay1 and image due</b></p> <p>TED Talk Video “Danger of a single story” by Chimamanda Ngozi Adichí (18:34) (Canvas link)</p> <p>“Danger of a single story” by David Brooks, NY Times (Canvas)</p>
Sept 15 TH	Sustainable Landscape Construction	<p>Read Chapter 3 “Sustainable landscape construction” (pp. 39-60) in <i>Sustainable Landscape Management</i></p> <p>Read Chapter 4 “Retrofitting existing landscapes for sustainability” (pp. 61-79) in <i>Sustainable Landscape Mgt</i></p> <p>View SITES v2 Web page “Certified Sites” <a href="http://www.sustainablesites.org/projects?q=projects">http://www.sustainablesites.org/projects?q=projects</a></p>

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Sept 20 T	Ecosystems and the Landscape	Chapter 5 "Ecosystem development and management" (pp. 81-99) in <i>Sustainable Landscape Management</i>  Read Chapter 6 "Environmental issues" (pp. 101-116) in <i>Sustainable Landscape Management</i>
Sept 22 TH	Directed review for Exam 1	Directed review for Exam 1
Sept 27 T	<b>EXAM 1</b>	<b>Exam 1</b>
Sep 29 TH	Landscape Perception	Read "Rare and commonplace beauty" by R. Hester (pp. 107-109) (Canvas)  Read "The shared landscape: What does aesthetics have to do with ecology?" by Gobster, Nassauer, Daniel, and Fry (Canvas)
Oct 4 T	Native Plants & Sustainable Landscape Design	View Website: Sustainable Landscape Demonstration Garden: <a href="https://www.clemson.edu/cafls/demo/">https://www.clemson.edu/cafls/demo/</a>
Oct 6 TH	Holley Owings, EarthDesign, MLA, ASLA	View Website: Earth Design: Landscape Architecture & Environmental Design: <a href="http://earthdesignsc.com/">http://earthdesignsc.com/</a>
Oct 11 T	Clemson Green Roofs -Watt Center	<b>Plant profile sheet1 due</b>
Oct 13 TH	Clemson Green Roof-Lee Hall	View video: Patrick Blanc, Interview in Paris/Green Walls (Canvas)
Oct 18 T	Sustainable Landscape Soils	Read Chapter 6 "Environmental issues" in <i>Sustainable Landscape Management</i> (pp. 101-116) Read Chapter 7 "Sustainable soils in landscapes" (pp. 119-130) in <i>Sustainable Landscape Management</i>  View "How to Collect a Soil Sample" Webpage Clemson Regulatory Services (Canvas) or <a href="https://www.clemson.edu/public/regulatory/ag-srvc-lab/soil-testing/collecting-samples.html">https://www.clemson.edu/public/regulatory/ag-srvc-lab/soil-testing/collecting-samples.html</a>  View Soil Testing Fact Sheet #1652/HGIC (Canvas) or <a href="https://hgic.clemson.edu/factsheet/soil-testing/">https://hgic.clemson.edu/factsheet/soil-testing/</a>
Oct 20 TH	Critical Thinking, Dr. David Knox, Director Clemson CT	
Oct 25 T	Sustainable Landscape Maintenance  CT2 essay	<b>Critical thinking essay2 and image due</b> Read Chapter 8 (pp. 193-214) "Managing trees, shrubs, and beds sustainably" in <i>Sustainable Landscape Management</i>  Read "What will the neighbors think? Cultural norms and ecological design" by Nassauer, Wang, and Dayrell (Canvas)  View video: The High Line (6:22) at <a href="http://www.youtube.com/watch?v=uRp8z4rLj-Q">http://www.youtube.com/watch?v=uRp8z4rLj-Q</a> (Canvas)



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Date	Class Item	Assignments/Required Readings
Oct 27 TH	Directed review for Exam 2	Directed review for Exam 2
Nov 1 T	<b>EXAM 2</b>	<b>EXAM 2</b>
Nov 3 TH	Floating Wetlands/Dr. Sarah White	
Nov 8 T	<b>FALL BREAK</b>	
Nov 10TH	Sustainable Lawns	Read Chapter 9 (pp. 161-190) Lawns in Sustainable Landscapes in <i>Sustainable Landscape Management</i>
Nov 15 T	Internship presentations	<b>Plant profile sheet2 due</b>
Nov 17 TH	Sustainable Pest Management	Read Chapter 10 (pp. 193-214) Sustainable Pest Management in <i>Sustainable Landscape Management</i>  Read HGIC <i>Beneficial Garden Insects</i> by Justin Ballew (Canvas link) Read HGIC Fact sheet #1173: <i>Native Pollinators</i> (Canvas link)
Nov 22 T	TBD: Lady Bird Johnson Wildflower Center Andrea DeLong-Amaya Video or project work	View website: Lady Bird Johnson Wildflower Center: <a href="https://www.wildflower.org/">https://www.wildflower.org/</a> View Native Plants Database: <a href="https://www.wildflower.org/plants/">https://www.wildflower.org/plants/</a>
Nov 24 TH	<b>Holiday</b>	
Nov 29 T	Susannah Horton, PLA, Parks & Recreation Manager, City of Asheville, NC	
Dec 1 TH	Directed review for Exam 3	
Dec 6 T	<b>Exam 3</b>	<b>Exam 3</b>
Dec 8 TH	Last class Exit survey completion	<b>Exit survey</b>
Dec 14 W	Final exam 8:00 am -10:30am	