

# HORT 3080 CT<sup>2</sup> Sustainable Landscape Garden Design, Installation, & Maintenance [2020]

**Instructor:** Dr. Ellen Vincent,  
**Class:** Online asynchronous  
**Office hours:** by appointment  
**Email:** ellenav@clemson.edu  
**Phone:** 864-568-5025

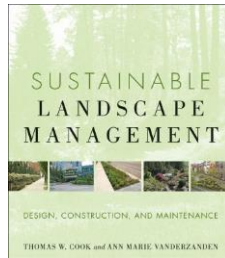
Photo by Craig Mehaffey



**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-](https://pascal-clemson.primo.exlibrisgroup.com/permalink/01PASCAL_CLEM/g45dlb/alma991014048313505612)

[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 what books they care to order

Dr. Vincent\_Horticulture\_ellenav@clemson.edu



### Sustainable Sites:

Holly Owings, MLA



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

Watt Center Green Roof



Lady Bird Johnson Wildflower Center



Photos by Ellen Vincent

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### Critical Thinking:

Dr. Frank Fear



Author Chimamanda N. Adichie



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.

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This class is a Clemson Thinks2 (CT2) seminar –developed to increase and enhance your critical thinking skills.

## 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.

**Exercises:** Two exercises that demonstrate experiential/kinesthetic learning of lecture cognitive material are expected.

**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.

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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%
Exercises	2	100 points each	15%
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.

**Exercises** submitted for grading will have each item worth the same amount of points e.g. four items on Exercise Worksheet will be worth 25 points each; three items on Exercise sheet will have each item worth 33.3 points).

**Extra credit opportunities** include **Canvas Discussions**: Engage in productive discussions (prompted in specific lectures) with classmates. Additional 5 points added to either CT2 essay or plant profile.

**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.

**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.

**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.

**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.

**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.

**Inclement 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



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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 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](mailto:alesias@clemson.edu).

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

## Sustainable Design, Installation, and Maintenance:

Joan Nassauer, MLA



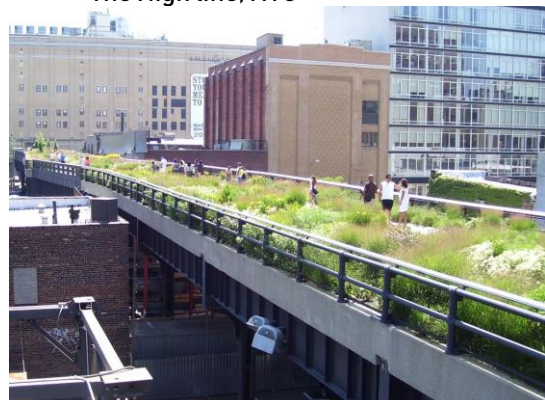
[http://seas.umich.edu/research/faculty/joan\\_nassauer](http://seas.umich.edu/research/faculty/joan_nassauer)

Randy Hester, MLA



<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)

The High line, NYC



*Dr. Vincent\_Horticulture\_ellenav@clemson.edu*

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## Lady Bird Johnson Wildflower Center, Austin TX



Photos by Ellen Vincent

Date	Class Item	Assignment
Aug 20 TH	Class overview: into 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 25 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>
Aug 27 TH	Principles of Design	Read Ingels “Principles of design” chapter 8 (pp. 139-159) in <i>Landscaping Principles and Practices</i> (Canvas)
Sept 1 T	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 3 TH	CT <sup>2</sup> : Danger of a Single Story Sustainable Teams	<p>TED Talk Video “Danger of a single story” by Chimamanda Ngozi Adichi (18:34) (Canvas link)</p> <p>“Danger of a single story” by David Brooks, NY Times (Canvas)</p>

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Sept 8 T	CT2 essay	<b>Critical thinking essay1 and image due</b>
Sept 10TH	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>
Sept 15T	Ecosystems and the Landscape	<p>Chapter 5 “Ecosystem development and management” (pp. 81-99) in <i>Sustainable Landscape Management</i></p> <p>Read Chapter 6 “Environmental issues” (pp. 101-116) in <i>Sustainable Landscape Management</i></p>
Sept 17TH	Directed review for Exam 1	Directed review for Exam 1
Sept 22 T	<b>EXAM 1</b>	<b>Exam 1</b>
Sep 24 TH	Landscape Perception	<p>Read “Rare and commonplace beauty” by R. Hester (pp. 107-109) (Canvas)</p> <p>Read “The shared landscape: What does aesthetics have to do with ecology?” by Gobster, Nassauer, Daniel, and Fry (Canvas)</p>
Sep 29 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 1 TH	Holley Owings, EarthDesign, MLA, ASLA	View website: Earth Design: Landscape Architecture & Environmental Design: <a href="http://earthdesignsc.com/">http://earthdesignsc.com/</a>
Oct 6 T	Plant Profile	<b>Plant profile sheet1 due</b>
Oct 8 TH	Clemson Green Roofs  Floating Wetlands	<p>View video: Green Roof Talk on Lee 3 (Canvas)</p> <p>View video: Patrick Blanc, Interview in Paris/Green Walls (Canvas)</p> <p>View video: Floating Wetlands/Dr. Sarah White</p>
Oct 13 T	Sustainable Landscape Soils	<p>Read Chapter 6 “Environmental issues” in <i>Sustainable Landscape Management</i> (pp. 101-116)</p> <p>Read Chapter 7 “S36ustainable soils in landscapes” (pp. 119-130) in <i>Sustainable Landscape Management</i></p> <p>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></p> <p>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></p>

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Oct 15 TH	Sustainable Landscape Maintenance	<p>Read Chapter 8 (pp. 193-214) “Managing trees, shrubs, and beds sustainably” in <i>Sustainable Landscape Management</i></p> <p>Read “What will the neighbors think? Cultural norms and ecological design” by Nassauer, Wang, and Dayrell (Canvas)</p> <p>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)</p>
Oct 20 T	CT2 essay	<b>Critical thinking essay2 and image due</b>
Oct 22TH	Directed review for Exam 2	Directed review for Exam 2
Oct 27 T	<b>EXAM 2</b>	<b>EXAM 2</b>
Oct29 TH	Susannah Horton, PLA, Parks & Recreation Manager, City of Asheville, NC	
Nov 3 T	<b>FALL BREAK</b>	
Nov 5 TH	Sustainable Lawns	Read Chapter 9 (pp. 161-190) Lawns in Sustainable Landscapes in <i>Sustainable Landscape Management</i>
Nov 10 T	Plant profile	<b>Plant profile sheet2 due</b>
Nov 12 TH	Sustainable Pest Management	<p>Read Chapter 10 (pp. 193-214) Sustainable Pest Management in <i>Sustainable Landscape Management</i></p> <p>Read HGIC <i>Beneficial Garden Insects</i> by Justin Ballew (Canvas link)</p> <p>Read HGIC Fact sheet #1173: <i>Native Pollinators</i> (Canvas link)</p>
Nov 17T	Lady Bird Johnson Wildflower Center Andrea DeLong-Amaya	<p>View website: Lady Bird Johnson Wildflower Center: <a href="https://www.wildflower.org/">https://www.wildflower.org/</a></p> <p>View Native Plants Database: <a href="https://www.wildflower.org/plants/">https://www.wildflower.org/plants/</a></p>
Nov 19 TH	Directed review for Exam 3	
Nov 24 T	<b>Exam 3</b>	<b>Exam 3</b>
Nov 26 TH	<b>Holiday</b>	
Dec 1 T	To be announced	
Dec 3 TH	Exit survey completion	<b>Exit survey</b>
Dec 9 W	Final exam 8:00 am -10:30 am	