

# HORT 3080 CT<sup>2</sup> Sustainable Landscape Garden Design, Installation, & Maintenance [2019]

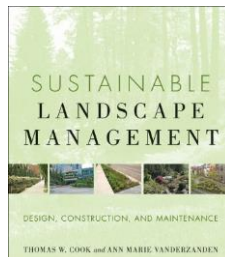
**Instructor:** Dr. Ellen Vincent,  
**Class:** P&A Room E-147 T, TH 9:30-10:45 AM  
**Office:** 173 P&A Building  
864.656.1342 office  
Office hours: Monday & Wednesday 9:00-11:00  
am or by appointment  
Email: [ellenav@clemson.edu](mailto:ellenav@clemson.edu)

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=db\\_s\\_a\\_def\\_rwt\\_bibl\\_vppi\\_i0](https://www.amazon.com/gp/product/0470480939/ref=db_s_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: <http://libcat.clemson.edu/record=b2645885>. 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.

APA citation:

Cook, T. & VanDerZanden, A.M.(2011), *Sustainable landscape management: Design, construction, and maintenance*. Hoboken, N.J.: Wiley.

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

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

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## Recommended Texts (optional)

- (1) *Manual of Woody Landscape Plants* by Michael Dirr (sixth edition, 2009), (required for HORT 303 Landscape Plants class)
- (2) *Herbaceous Perennial Plants: A Treatise on Their Identification, Culture, and Garden Attributes* by Allan Armitage (second edition, 2008)



## 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:

Judge Ricardo Urbina Dr. Frank Fear



David Brooks



Author Chimamanda. N. Adichi



[https://library.columbia.edu/locations/ccoh/digital/rule\\_of\\_law/urbina.html](https://library.columbia.edu/locations/ccoh/digital/rule_of_law/urbina.html)

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

<https://twitter.com/nytdavidbrooks>

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

## 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 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
- Pre and post critical thinking testing built into the course; subject content exams

## Teaching/Learning Strategies

Critical thinking skills will be promoted through modeling (classroom experience), personal experience/reflection (essays), discourse (group exercises in class), 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.
- Pre and post scores on CT tests will be available 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:** 2 CT tests (on-line pre-test and in class post test); 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	15%
Plant Profile sheets	2	100 points each	15%
Participation/engagement	Every session	100 points	5%
Group oral representation	1+	100 points	10%
Exams on-line CT	2	100 points each	15%
Exams in-class	4	100 points each	40%

Attendance is mandatory

Extra credit opportunities may be announced during the semester

**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.

**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.

**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. Also, 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:** Please be sure to include an accurate and current subject line in each email. 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.

**Clemson University Title IX (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 in employment, educational programs and activities, admissions and financial aid. This



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includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Ms. Alesia Smith is the Clemson University Title IX Coordinator, and the Executive Director of Equity Compliance. Her office is located at 110 Holtzendorff Hall, 864.656.3181 (voice) or 864.656.0899 (TDD).

**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), or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if possible, but there could be a significant wait due to scheduled appointments. 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/>.

**Instructor absence:** If I have not arrived for class within the first fifteen minutes please feel free to lead a discussion of the previous class material or dismiss class, at your option. I will be in contact with the class via email as soon as possible.

**Inclement weather:** When county government offices are closed, local Clemson University campuses also are closed.

Please see me privately 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)

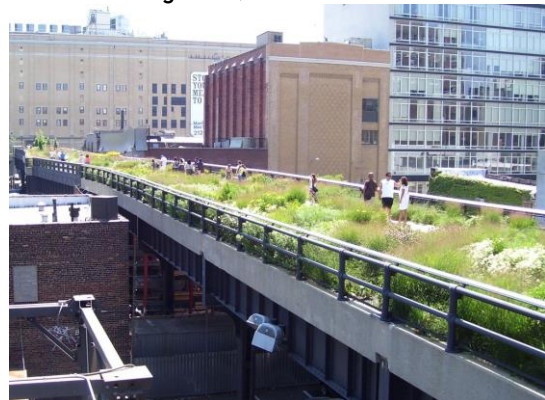
<https://www.pps.org/article/rhester>

[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)

Randy Hester, MLA



The High line, NYC



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## Lady Bird Johnson Wildflower Center, Austin TX



Photos by Ellen Vincent

Date	Class Item	Assignment
Aug 22 TH	Class overview: into questionnaire, syllabus, intro to sustainability	Read <i>Sustainable Landscape Management</i> chapters 1&2 (pp.1-38)  View Webpage "Sustainable Sites Initiative" and lightly review "Certification" and "Directory/Projects" at <a href="http://www.sustainablesites.org/">http://www.sustainablesites.org/</a>
Aug 27 T	Sustainable landscape design	Read <i>The Case for Sustainable Sites</i> (2009)  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>
	Principles of design Powerpoint on Canvas for those who did not take HORT 1010	Read Ingels "Principles of design" chapter 8 (pp. 139-159) in <i>Landscape Principles and Practices</i>
Aug 29 TH	e-Learning day David Knox, Founding Director CT	Critical Thinking pre-test on-line
Sept 3 T	Critical thinking introduction	Read Brookfield <i>Teaching for Critical Thinking</i> chapter 1 (pp. 1-25)  Read Facione <i>Critical Thinking: What It Is and Why It Counts</i> (pp. 1-28)
Sept 5 TH	Sustainable teams	Read Chapter 3 "Sustainable landscape construction" (pp. 39-60) in <i>Sustainable Landscape Management</i>  View Debate: Will Alsop and Martha Schwartz <a href="https://vimeo.com/2552999">https://vimeo.com/2552999</a> (8:01)  Read Chapter 4 "Retrofitting existing landscapes for sustainability" (pp. 61-79) in <i>Sustainable Landscape Mgt</i> CT2 essay1 assigned
Sept 10 T	Sustainable landscape construction	<b>Critical thinking essay1 and image due by 9:30 am.</b> View SITES v2 Web page "Certified Sites" <a href="http://www.sustainablesites.org/projects?q=projects">http://www.sustainablesites.org/projects?q=projects</a>

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Date	Class Item	Assignment
Sept 12 TH	Ecosystems and the landscape	Read Chapter 5 “Ecosystem development and management” (pp. 81-99) and Chapter 6 “Environmental issues” (pp. 101-116) in <i>Sustainable Landscape Management</i>
Sept 17 T	Landscape perception/client interview/user’s needs	Read “Rare and commonplace beauty” by R. Hester (pp. 107-109) on Canvas  Read “The shared landscape: What does aesthetics have to do with ecology?” by Gobster, Nassauer, Daniel, and Fry on Canvas
Sept 19 TH	CT <sup>2</sup> : Danger of a Single Story  Directed review for Exam 1	“Danger of a single story” by David Brooks, NY Times TED Talk Video “Danger of a single story” by Chimamanda Ngozi Adichie (18:34) <a href="https://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story">https://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story</a>
Sept 24 T	<b>EXAM 1</b>	
Sep 26 TH	Internship presentations	Plant profile sheet 1 or CT essay 2 assigned
Oct 1 T	Holley Owings, EarthDesigns, MLA, ASLA	<b>CT essay 2 or Plant profile sheet1 due by 9:30 a.m.</b>
Oct 3 TH	Native plants in the sustainable landscape	Read “What will the neighbors think? Cultural norms and ecological design” by Nassauer, Wang, and Dayrell on Canvas
Oct 8 T	Lee Hall green roof tour, Jeff Baker, Superintendent Central Campus Grounds	Read Chapter 8 (pp. 193-214) “Managing trees, shrubs, and beds sustainably” in <i>Sustainable Landscape Management</i>
Oct 10 TH	Watt Center green roof tour: Tim Howard, Project Manager Watt Center timh@clermson.edu	
Oct 15 T	FALL BREAK	
Oct 17 TH	Sustainability in Practice: Sierra Nevada Brewery, Mills River, NC with Susannah Horton, MLA; Planner and LA with Design Workshop Asheville; Lecturer Clemson LA Dept. (Skype)	Read <i>The Sustainable Sites Initiative: Guidelines and Performance Benchmarks 2009</i> Prerequisite 1.1 (pp. 15-18)

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Date	Class Item	Assignment
Oct 22 T	Environmental issues	<p><b>CT essay2 or Plant profile sheet 1 or 2 due by 9:30 am.</b> Read Chapter 6 “Environmental issues” in <i>Sustainable Landscape Management</i> (pp. 101-116)</p> <p>Read Chapter 7 “Sustainable soils in landscapes” (pp. 119-130) in <i>Sustainable Landscape Management</i></p> <p>Read <i>The Sustainable Sites Initiative: Guidelines and Performance Benchmarks 2009</i> “Introduction; How to use the guidelines and performance benchmarks; and Index of prerequisites and credits” (pp. 1-14)</p>
Oct 24 TH	Sustainable landscape soils Directed review for Exam 2	
Oct 29 T	<b>EXAM 2</b>	
Oct 31 TH	Landscape maintenance	<p>Read “What will the neighbors think? Cultural norms and ecological design” by Nassauer, Wang, and Dayrell on Blackboard</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></p>
Nov 5 T	Clemson MLA program Paul Russell, Associate Professor, Director of Graduate Studies, Department of Landscape Architecture <a href="mailto:russel5@clemsn.edu">russel5@clemsn.edu</a>	
Nov 7 TH	Sustainable lawns	Read Chapter 9 (pp. 161-190) Lawns in Sustainable Landscapes in <i>Sustainable Landscape Management</i>
Nov 12 T	Socratic questioning Ricardo Urbina (retired federal court judge) attending	
Nov 14 TH	Critical Thinking post test (David Knox, Founding Director CT) <b>Bring fully charged laptops to class</b>	Plant profile sheet2 or CT essay2 assigned
Nov 19 T	Sustainable pest management	<p><b>Plant profile sheet2 or CT essay2 due by 9:30 a.m.</b></p> <p>Read Chapter 10 (pp. 193-214) Sustainable Pest Management in <i>Sustainable Landscape Management</i></p>



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Date	Class Item	Assignment
Nov 21 TH	Sustainable Sites Project	
Nov 26 T	Directed review for Exam 3	
Nov 28 TH	Holiday	
Dec 3 T	<b>EXAM 3</b>	
Dec 5 TH	Critical review in class/survey	
Dec 11 W	Final exam 8:00 am -10:30 am	

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## Critical Thinking Protocol in Visual Essay

Grading rubric: 100 points total

Each essay should contain a header that includes: Name; Class title; Date; CT2 Visual Essay  
Save the essay with your last name and the essay # in the saved file name: e.g. Smith\_CT2 essay1

Critical Thinking Essay Item	Points
<p><b>Identify a claim/belief/assumption from class or readings that you personally connect with:</b></p> <p>Identify and clearly state a specific claim/belief/assumption that you perceive. <b>Use words “the claim is...”</b> Include the source(s) you are using in the text. Do not use quotes-use your own words.</p>	<b>10</b>
<p><b>Investigate the validity of the claim/belief/ assumption:</b></p> <p>How can you check the author’s claim/belief/assumption for accuracy and validity? Be specific and use a <b>minimum of two methods</b> to determine the legitimacy of the author’s claims. <b>Identify the method in the sentence each time.</b></p> <p><b>Experiential</b> (personal experience); <b>authoritative</b> voices (professors, .gov, .edu sites); <b>disciplined</b> (peer reviewed literature; surveys; fact checks; repetition of experiments, etc.)</p> <p><b>In-text and end citations must be used so the reader can obtain or view the source.</b></p>	<b>20</b>
<p><b>Reflection from your past:</b></p> <p>Using your own personal experiences share a story from your past that was triggered by the claim/belief/assumption. Make it vivid so the reader feels as though they were there with you.</p>	<b>10</b>
<p><b>Explore alternate possibilities/conclusions using multiple viewpoints:</b></p> <p>What other possible perspectives, explanations, or interpretations can you suggest for a deeper understanding of the claim/belief/assumption? <b>Use text “An alternate or opposing view is...”</b> State the source of the view.</p>	<b>10</b>
<p><b>Action statement/Concluding personal informed actions:</b></p> <p>What informed action can you take in your daily life as a result of your critical analysis? Sit back and think about your critical examination of this topic. -What has changed (if anything)? <i>“I now plan to...”</i> or -What will you do now and why? Use “I” in this concluding section. Sample: <i>“As a result I will...”</i> or <i>“From now on I intend to...”</i> <b>An actual act or example of what you can/will do must be mentioned.</b></p>	<b>10</b>

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<b>Image:</b> Tells the story of your search all by itself	<b>20</b>
<b>Image is correctly cited to source</b>	<b>20</b>
<b>TOTAL</b>	<b>100</b>

\*Additional points may be lost for poor spelling and grammar, incorrect header or saved file name.

Please review the sample essays posted on Canvas prior to writing and submitting.

Ethical judgment essay	<b>Items</b>	<b>Points</b>
	<p><b>Identify ethical issue (<i>cognitive</i>):</b></p> <p>Clearly identify the issue and the tension.</p> <p>Respectfully identify the opposing viewpoints (at least two) and their <b>primary authors</b>/believers (this provides context).</p> <p>Four citations are needed (two for each side). See APA sample citations if needed. Be sure to include scholarly sources (.gov, .edu, peer-reviewed publications). In-text and end citations required.</p>	<b>40</b>
	<p><b>Reflection from your past (<i>affective</i>):</b></p> <p>Share a story from your past that was triggered by this new knowledge.  <i>-Make it vivid so the reader feels as though they were there with you.</i>  <i>Use "I" in this essay.</i></p>	<b>30</b>
	<p><b>Your recommendations for responsible actions/solutions (<i>kinesthetic</i>):</b></p> <p><i>-Sit back and think about the various viewpoints plus your past experience(s).</i></p> <p><i>-What has changed for you (if anything)?</i></p> <p>What are the <b>large scale consequences</b> or implication of this issue?</p> <p>What will <b>you do</b> now as a result of this ethical issue + past experience?</p> <p><i>What <b>action(s)</b> can you take?</i></p> <p><i>Use "I" in this concluding section.</i></p>	<b>30</b>
	<b>TOTAL</b>	<b>100</b>

\*Additional points may be lost for lack of header; incorrect saved file name; poor spelling and grammar; quotes. Do not use quotes, unless it is imperative. Quotes need a page number in the in-text citation.