IDH2930: (Un)Common Reads
Systems Thinking Made Simple: New Hope for Solving Wicked Problems

Fall 2018
Time: Monday 9:35 – 10:25
Location: LITTLE 0117

Instructor:	Christa D. Court	**Email:**	ccourt@ufl.edu
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Office Hours:	T – R 10:00 – 12:00		

Course Description:
The term *systems thinking* has been used in many academic disciplines, from engineering to management, to describe a variety of approaches to problem solving that attempt to balance holistic and reductionist thinking by taking the whole system into account as well as its parts and by examining the relationships and interactions between the parts. Systems thinkers often see interconnections that others do not, challenge boundaries, and see things as part of a larger whole. When you change the way you look at things, the things you look at change, and ideas that can change the world become possible. Systems thinking is now the preferred approach to analyzing and ultimately solving many of the complex problems that we face in the real world such as climate change, poverty, and the shortage of potable and clean water. This course will cover the book *Systems Thinking Made Simple: New Hope for Solving Wicked Problems* and introduce the systems thinking approach to students from a variety of disciplines so that they are better prepared to tackle problems associated with complex adaptive systems. The principles and methods introduced during this course will allow students to not only excel in their everyday lives and their respective academic disciplines but will also provide a foundation for communicating across disciplines and analyzing problems as part of a transdisciplinary team.

Expected Student Learning Outcomes:
At the end of the course, a successful student should be able to:

1. Define the four rules of systems thinking: 1) Distinctions, 2) Systems, 3) Relationships, and 4) Perspectives

2. Visually represent the structure of and information within any system, regardless of complexity

3. Clearly and effectively communicate the principles and applications of systems thinking to a variety of audiences

Prerequisites:
Admission into the University of Florida Honors Program

Required Course Materials:

- **Textbook:** D. Cabrera and L. Cabrera, *Systems Thinking Made Simple: New Hope for Solving Wicked Problems*, Odyssean, 2015.

- **Plectica Account:** The ideas in *Systems Thinking Made Simple: New Hope for Solving Wicked Problems* can be applied using systems thinking and modeling software. The Cabrera Research Lab at Cornell University provides Plectica (a replacement of MetaMap, which is referenced in the text) as a free, online mind mapping app. Students will be expected to sign up for a Plectica Account to access the software app via the internet. This particular software app will be used by students for the Final Projects.

  Sign up for Plectica: Follow the steps below to sign up:

  - Open an internet browser and navigate to https://www.plectica.com/.
  - Click on the *Sign up for free and get started* icon in the center of the page.
  - Sign in with Google or enter your email and create a password.
  - Click *Agree and create my Account*

Course Outline:

Course Assignments:

- **Reading Assignments** – Each week, with the exception of the first week and the weeks that final projects are presented, there will be assigned reading. We will cover chapters of the textbook as outlined above in the Course Outline.

- **Writing Assignments** – Each week, with the exception of the first week and the weeks that final projects are presented, there will be a brief writing assignment related to the course material. The topic for each writing assignment will be communicated to students each week during the class period and assignments will be due at the beginning of the following class period. Writing assignments must be typewritten using 12 pt. Times New Roman font and one inch page margins and should not exceed one page in length. Writing assignments must be turned in at the beginning of class or e-mailed to the instructor prior to the class period beginning. Each writing assignment is worth 40 points and your final score for writing assignments will be composed of your best 10 of 11 assignments. It is in your best interest to attempt all assignments. Late submissions will be accepted up to 2 days late but will be given half credit (e.g. if your score on a particular assignment is 30 points, an equivalent late assignment will be given a score of 15 points). Late submissions will not be accepted more than 2 days after the deadline.

- **Final Project** – There will be a final project that will require the use of Plectica, a word processor (Microsoft Word, LaTeX, etc.), and a presentation software (Microsoft PowerPoint, Beamer, Prezi, etc.). Students will identify a problem of their choosing, describe current approaches to analyzing or resolving the problem, and outline how to improve this approach through systems thinking. This final project will involve a brief written report, mind maps, and a brief oral presentation. Depending on the size of the class, the final projects might be completed by students as individuals or in small groups. The final project is worth 500 points towards your final grade. Additional details on the final project will be distributed within class.

Composition of Final Score:

Course Assignments	Total Points	% of Final Grade
Attendance and Participation	100 points	10%
Writing assignments	400 points	40%
Final project	500 points	50%
Total	**1,000 points**	**100%**

Student Evaluation:

Grade	Percentage	Total Points	Grade Points
A	$\geq 90.0\%$	≥ 900	4.00
B+	$86.0 - 89.9\%$	$860 - 899$	3.33
B	$80.0 - 85.9\%$	$800 - 859$	3.00
C+	$76.0 - 79.9\%$	$760 - 799$	2.33
C	$70.0 - 75.9\%$	$700 - 759$	2.00
D+	$66.0 - 69.9\%$	$660 - 699$	1.33
D	$60.0 - 65.9\%$	$600 - 659$	1.00
E	$\leq 59.9\%$	≤ 599	0.00

Important Dates:

Course Policies:

- Please sign up for Plectica https://www.plectica.com/.

- We have weekly reading and writing assignments. Students are expected to complete reading assignments before class and writing assignments are due at the beginning of class.

- Late writing assignments will only be accepted up to two days after the due date. Late writing assignments will receive only half credit and writing assignments that are not submitted or that are submitted more than two days after the deadline will receive a 0.

- You may discuss writing assignments with other students, but you must write up your assignment independently and in your own words.

- Your lowest writing assignment score will be dropped when calculating your final writing assignment score.

Class Policies:

- Regular attendance and class participation is essential and expected. As such, class participation and attendance will make up 10% of your final grade.

- If you have to miss a lecture(s), please notify the instructor in advance. Also, I strongly recommend you study the material you missed before you return to class. If you miss a lecture, I recommend doing the following:

    - Photocopy and read notes from someone who was in class
    - Read the relevant chapter(s) from the textbook

    After you have done this, you may contact me if you need clarification on any materials.

- Be courteous when using mobile devices. Make sure your cell phone is turned fully off, or is placed in silent mode. No texting, reading emails, playing games, or whatever else it is that people do with these devices during class.

- If you use a laptop in class, turn off the sound. Again, no chatting, reading emails, playing games, etc.

Academic Integrity: This course will adhere to the Academic Integrity Honor Code of the University of Florida: *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.* I expect all work that you do in the course to be your own. Lack of knowledge of the Academic Integrity Honor Code (https://www.dso.ufl.edu/sccr/honorcodes/conductcode.php) is not a reasonable explanation for a violation. Questions related to course assignments and the Academic Integrity Honor Code should be directed to the instructor.

☞ Violations of the Academic Integrity Honor Code will result in judicial action. Possible sanctions include but are not limited to, the following: (1) Require the student to redo the assignment; (2) Require the student to complete another assignment; (3) Assign a grade of **zero** to the assignment; or (4) Assign a final grade of **zero** for the whole course. Sanctions will be imposed based upon the instructor's evaluation of the nature and gravity of the offense.

Resources for Disabled Students: If you have a documented disability and wish to discuss academic accommodations, please contact me as soon as possible to set up the appropriate arrangements. Please do not wait until an assignment is due to request accommodations. Further information can be found at http://www.dso.ufl.edu/drc/.

Student Counseling and Support:

Several resources are available on campus for students. http://www.umatter.ufl.edu/

- Honors Advising
  http://www.honors.ufl.edu/current/advising/
  343 Infirmary Building
  (352) 392-1519

- Dean of Students
  http://www.dso.ufl.edu
  P202 Peabody Hall
  (352) 392-1261

- Counseling and Wellness Center
  http://www.counseling.ufl.edu/cwc/
  2190 Radio Road
  (352) 392-1575

- Student Health Care Center
  http://shcc.ufl.edu
  Infirmary Building
  (352) 392-1161

- Career Resource Center
  http://www.crc.ufl.edu
  1st Floor, Reitz Union
  (352) 392-1601

- International Center
  http://www.ufic.ufl.edu/
  Suite 170, Hub Building
  (352) 392-5323