

DCP 3210: Sustainable Solutions for the Built Environment, Section 5265

Fall 2023 | 3 Credits

Instructor:	Azza Kamal, PhD, LEED AP ND Program in Sustainability & the Built Environment (SBE), and Department of Urban and Regional Planning College of Design, Construction and Planning (DCP) University of Florida.
Instructor's Office:	ARCH 132 UF Building #0268
Instructor's Contacts & Office Hours:	Preferred: Canvas email Alternative: azzakamal@ufl.edu O: (352) 294-1425 R (10:00 AM – 12:00 PM) or by appointment
Course Time & Location:	R Period 6 - 8 (12:50 PM – 3:50 PM) RNK 106 UF Building #0272
Co/Prerequisite:	BCN 1582 or IDS 2154, or a course approved in the topic area.
General Education Credit:	None
Final Exam Schedule:	No Final Exam: A Final/Semester Project is due by the end of the semester.

IT IS IMPORTANT TO READ THIS ENTIRE SYLLABUS ON YOUR FIRST DAY OF CLASS

Catalog Description:

Uses case studies to examine how sustainability can be achieved in the built environment, from choosing materials and finishes to patterns of regional land use.



Photo Credit: Kamal, A. (2022); Kronsberg District, Hannover, Germany.

COURSE OVERVIEW

This course focuses on the knowledge, skills, attitudes, and values necessary to shape a sustainable future. Education for Sustainable Development and the Built Environment mean including key issues into teaching and learning, for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption.

Education for sustainability is essential to help people to understand and accept the need for significant changes in the way we operate socially and economically, in order to ensure a sustainable future for everyone. In this course, students will learn to think about sustainability issues, make assessment, identify strategies and technologies that addresses triple bottom line of sustainability using knowledge and skills gained in the course.

COURSE OBJECTIVES

This course’s objectives are to facilitate student learning and leadership in the establishment and enhancement of more sustainable planet. The objectives emphasis is on evaluating evidence-based products, systems, material, and services, and think about applying new strategies and technologies that contributes to more sustainable world via at home preparation, in-class discussions, videos, online engagement, and individual and collaborative team assignments, students will:

- 1) Explore and understand sustainability.
- 2) Evaluate and communicate the effectiveness of current sustainability initiatives in the built environment and ability to assess whether they are operating in an effective sustainability framework.
- 3) Create a focus on the execution of strategies to drive long-term sustainability performance.
- 4) Develop own body of knowledge to improve own sustainability competency and learn the importance of communicating the built environment’s sustainability level.
- 5) Understand how to reflect on the future of sustainability in the built environment, communities, and cities.
- 6) Identify the characteristics of best practice in sustainable building/development/infrastructure initiatives and look beyond current initiatives to resilient buildings and cities.
- 7) Communicate and advocate sustainable design principles, strategies, solutions and/or outcomes.

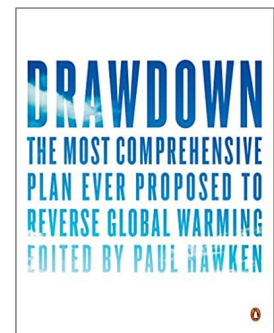
STUDENT LEARNING OUTCOMES (SLO)

Upon completion of this course, successful students will be able to:

- Distinguish the similarities and differences between sustainability and resilience.
- Understand how sustainable solutions are developed, deployed, monitored, measured, and/or modeled in service to the betterment of people, place, and planet.
- Formulate and deliver higher quality verbal and written arguments.
- Demonstrate an improved ability to think holistically and to learn from other people and professions.
- Interact effectively as a part of a team exploring important issues.

REQUIRED TEXT/READING

- Hawken, P. (2017). **Drawdown: The most comprehensive plan ever proposed to reverse global warming** (<http://www.drawdown.org/> , Cost ~ \$15 on Amazon)
- In addition to the required text, various supplemental, free publications identified for class reading/discussion and/or assignments is supplied viasyllabus on Canvas e-Learning portal. Students expected to complete readings as advance preparation for class discussion.
- In addition to the required text(s), various supplemental, free publications identified for class discussion and/or assignments may be supplied via the UF Canvas e- Learning portal (<https://lss.at.ufl.edu/>), such as the following:



1. BuildingGreen	1.1. Homepage https://www.buildinggreen.com/ 1.2. Knowledge Base https://www.buildinggreen.com/knowledge-base 1.3. Product Guidance https://www.buildinggreen.com/product-guidance
2. Drawdown	2.1. Homepage https://www.drawdown.org/ 2.2. Solutions https://www.drawdown.org/solutions
3. Green Building Advisor	3.1. Homepage https://www.greenbuildingadvisor.com/ 3.2. Green Basics https://www.greenbuildingadvisor.com/green-basics
4. My Florida Home Energy	4.1. Homepage http://www.myfloridahomeenergy.com/ 4.2. Find Help http://www.myfloridahomeenergy.com/help/

ADDITIONAL EXPENSES

Students are expected to pay a one-time **Atlanta fieldtrip fee (estimated at \$260 to \$330 per student)**, depending on the total number of students in this class) to Rene Douglas (r.douglass@ufl.edu) in the DCP Dean's office. Payment can only be in the form of a check or money order payable to University of Florida. Students also need to procure and use their own mobile file storage and transfer device (e.g., USB thumb drive) or web-based service - as needed- for class presentation.

INSTRUCTIONAL METHODS AND EXPECTATIONS

This course includes lectures, readings and reflections, multi-media materials, in-class engagement activities (individuals and groups), research/writing, fieldtrips (in-town and out of town), a group semester project, and interaction with local and appointed officials. The course may periodically include guest lecturers and short site visits (in/and outside class time). Students are encouraged to take content and contextual notes about lectures by guest speakers, and videos, as these materials may also be referenced on course assignments and projects. The following is a summary of expectations:

- Student expectations of instructor: enthusiasm for the course; engaging lectures; application of knowledge through classroom activities and fieldwork; easy to access course materials; clear guidance and assessment rubric; openness and encouragement of critical thoughts and new ideas; constructive feedback, and reasonable flexibility to meet with students outside of class.
- Instructor expectations of students: compassionate curiosity; positive attention and intention; enthusiasm about learning new ideas and contribution to the learning environment, consistent attendance; punctual arrival; active participation in class discussions and activities; advance-reading and note preparation of assigned reading; on-time completion/submission of all assignments; proper citation management; professional attitude, adherence to proper netiquette and all University rules and regulations.

COURSE COMMUNICATIONS AND E-LEARNING/ CANVAS PORTAL

This class will be delivered through in-person instructions. The instructor will utilize the [UF Canvas e-Learning](#) portal as the primary medium to send announcements and to distribute course information, assignments, readings materials, resources, and grading. Students are responsible for checking Canvas portal regularly for announcements, course content, access to all supplemental readings, and to submit assignments and projects. Readings and changes to the syllabus will also be posted on Canvas.

Lecture slides will be posted on Canvas in advance of each scheduled lecture. Reviewing materials online is never a substitute for class attendance. Lectures posted on Canvas by instructor are not intended to be a complete study aid and should be viewed as supplementary to personal notes.

- **Canvas email is my preferred method of communication.** Please don't email me on my campus email, rather on Canvas email system. I will answer your email on the same system. Please allow up to 24 hours for a reply. Proper email etiquette is expected. It is your responsibility to ensure that you either login to Canvas to retrieve instructor's emails or have them set to be forwarded to your university's email account. To login to Canvas, provide your GatorLink username and password. If you are new to Canvas or have any problems with it, **please contact the Help Desk at 392-HELP.**
- It is your responsibility to submit assignments on time through Canvas. If you are having problems uploading your assignment to Canvas, you must immediately contact the Help Desk [392-HELP (4357) or helpdesk@ufl.edu] to report the problem and receive a ticket to document the problem. I can only extend the submittal deadline if you have contacted the Help Desk ahead of the assignment deadline and received a ticket. The Help Desk is available by phone and email 24 hours a day, 7 days a week.

WEEKLY MEETING AND SUBMISIONS

Monday	Tuesday	Wednesday	Thursday*	Friday	Saturday	Sunday
			Lecture, followed by engagement (applied and hands-on learning)			Submit Quiz (by 11:59 PM) Submit Discussion (by 11:59 PM) and work on Final Project

*There is a scheduled Atlanta fieldtrip from Thursday to Saturday (3/2 to 3/4). Attendance is required (see additional fees in the.

ASSIGNMENTS AND GRADING

According to Southern Association of Colleges and Schools Commission on Colleges [SACS] that our university abides by, one credit hour represents “not less than 1 hour of classroom or direct faculty instruction and a minimum of 2 hours out of class student work each week for approximately 15 weeks for one semester”. Thus, **students are expected to spend approximately 9 hours every week for this 3-credit hour course**. This time is expected to be spent on the work required per week for completing lectures, videos, readings, quizzes, discussions, assignments, and semester project for this course. Please be sure to schedule the appropriate amount of time each week to devote to this class and the various assignments.

All grades will be posted in the Canvas gradebook. Any discrepancies with points displayed in the gradebook should be addressed directly with the instructor. Course grades will neither be curved, nor rounded up. *Any requests for extra credit or special exceptions to these grading policies will be interpreted as an honor code violation (i.e., asking for preferential treatment) and will be handled accordingly.*

Assignments Points and Weights

Assignment*	Points	Percent
Attendance and Punctuality	100	10%
Reading discussion and in-class activities	100	10%
Quizzes (8 X 25 each)	200	20%
Reflections (8 X 25 each)	200	20%
Term Project (Groups)		
▪ 3 Presentations: (3 X 50 each)	150	15%
▪ Reports (several submissions)	250	25%
Total	1,000	100%

**Extra credit: (20 points or 2%) available for Submission of GBLC Summary Report*

Grading Scale

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Numeric Grade	93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59
Quality Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0

Final student grades will follow University of Florida grades and grading policies.

- Undergraduate Students [grading policy](#)

CLASS POLICY AND EXPECTATIONS

Attendance Policy

You are expected to be an active participant in the class. Attendance is mandatory and participation is graded based on each class period (i.e., missing a multi-period day of class will count as multiple absences in accordance with the number of periods). **Students may miss up to 4 teaching periods (not 4 classes)** without penalty. Students with **5 to 6 unexcused period absences will encounter a 10% grade reduction** (one letter grade) from their total semester grade. **7 or more periods of unexcused absences will result in failing this course.**

The course requires out-of-town travel to **ATLANTA for a field trip from Thu 3/2 to Sat 3/4: Cost per Student [\$250 to \$260] + Meals on your own (2 Dinners+ 3 Lunches)**. Students are responsible for presenting the excused letter for their professors in order to be present at the fieldtrip. Instructor will have the template letters available on the 2nd week of the semester.

According to University policy, absences may be excused due to illness, religious holiday, emergency, death in the family, or participation in official University-sponsored athletic events or scholarly activities. Please inform the instructor of any anticipated absences as early as possible and be prepared to provide appropriate documentation. You are responsible for contacting a classmate to obtain notes on the materials covered.

Requirements for class attendance and **make-up exams, assignments, and other work** in this course are consistent with University policies as found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

If you encounter an emergency or illness that requires an extended absence, you may wish to **contact the Dean of Students Office** (202 Peabody Hall, 392- 1261) for assistance. Failure to attend class regularly, consistent tardiness, and/or early departure will result in a significant negative impact on your attendance and class participation grades. Missing a substantive portion of a class, whether you arrive late or leave early without prior approval, will also be considered an unexcused absence. This means the following:

- Come to class on time and complete weekly readings and assignments prior to class discussions.
- Submit your work on time.
- Participate in class and be an active listener (i.e., listen, respond, ask questions, and make comments).

Attendance, Punctuality, and Class Participation

Your engagement in, and contribution to and leading, class discussions is essential to the success of this course as both instructors and students benefit from learning from new perspectives. You are expected to be well prepared for each class by keeping up with scheduled readings, completing assignments, and creatively contributing information and commentaries.

Critical thinking and problem solving require robust, informed conversation. If an interesting issue in sustainability and the built environment is receiving considerable attention in the audio or visual media, it may be discussed in class. Similarly, if there are issues, ideas, or readings that you want included in this course, please let the instructor know. This is your course, and together we will make every reasonable attempt to accommodate new ideas. Thus, you should plan to invest some of your time into finding material and leading discussions on those new ideas. You are expected to participate via active listening and thoughtful discourse. The following rubric will be employed to assign class participation points:

Qualities	Preferred (4 pts)	Acceptable (3 pts)	Passing (1 pts)	Unacceptable (0 pts)
Punctuality	Arrives on time	Arrives less than 5 minutes late	Arrives 5-10 minutes late	Absent, or arrives more than 10 minutes late (w/o explanation)
Commentary	Comments are relevant and reflect understanding and good preparation	Comments are mostly relevant, but understanding may be slightly lacking	Comments are minimal and demonstrate poor preparation	No comments are made or disruption to others.
Demeanor	Clear enthusiasm	Not overly enthusiastic, but positive	Partially engaged, but not enthusiastic or positive	Disengaged, texting, online, et.

Personal Conduct Policies

Treat this course as you would a new job. Above all else, the classroom is a place of respect for people and ideas. You are expected to treat your fellow classmates, the instructor, guests, and others with respect, honesty, professionalism, and politeness. Please be on time and prepared to share your informed questions, impressions, and interpretations of the current week's materials. Tardiness is unacceptable and rude to both the instructor and your fellow classmates. If you need to leave class early, please let the instructor know ahead of time and sit nearer to the door so as not to disrupt class. A break will be provided approximately every 50 minutes for any multi-hour block. **Students engaging in disruptive behavior will be asked to leave the class and will be marked absent for the day.**

Netiquette – Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats. Please refer to: <http://biostat.ufl.edu/resources/e-learning-resources/e-learning-basics/etiquette-online/>

Cell Phones

Cell phones and other electronic devices must be set to silent or vibrate mode during class. Cell phones must be put away during class time. Students who receive or make calls or text messages during class will be asked to leave and marked absent for the day.

Tablets & Laptops

You may use tablets or laptops to take notes, access course materials, and/or complete in-class assignments. If you are observed using your electronic device for social media, email, messaging, and/or other non-class uses, you will be asked to leave and marked absent for the day.

Make-Up Policies

There is no make-up policy for exams, quizzes, and in-class activities missed due to unexcused absences. If you are sick or have an emergency that prevents you from taking an exam at the scheduled time, it is your responsibility to contact the instructor as soon as possible. Documentation of the illness, or emergency date will be required. If you need to schedule a make-up exam, please email the instructor with a detailed explanation, and attach documentation. Make-up exams will be given at the instructor's discretion. Scheduling make-up exams is the responsibility of the student and should be done before the scheduled exam time.

If you have a serious emergency or life event, **please contact the Dean of Students Office** (www.dso.ufl.edu), and they will contact all of your instructors so that you do not have to provide documentation of the emergency/death in order to make-up exams and coursework. You and your instructor may work together to create a schedule for make-up coursework upon your return. See other sections of **Class Policy and Expectations** for more information.

Assignments and Submission Policy

Assignments will be opened on Canvas in advance of their due dates and must be submitted by their posted deadlines. It is your responsibility to ensure that each assignment has been successfully uploaded to Canvas for instructor grading. If you anticipate being unable to submit an assignment on time for an excusable reason, you must submit the assignment early or notify the instructor as early as possible. Extensions are not granted lightly and must be arranged in advance. Otherwise, **late work will be marked down by 10% for each day it is late. No work will be accepted after 5 days** without a pre-approved excuse. The following is a summary of the expected coursework. Detailed guidance and assessment rubric for each will be available on Canvas throughout the semester:

Reading and in-class activities (Individual): 10% of Semester Grade

There are weekly in-class discussion and group activities and exercises, site visits and required out-of-town fieldtrips. Students are expected to come to class prepared, completed assigned reading and research, and have their summary notes to share with the rest of class. They are also expected to be fully engaged, and respectful for their peers' discussion points. Evaluation will be based on engagement, positive demeanor, respectful and constructive feedback, working collaboratively with a group, quality, insight, accuracy, and quality of work produced in class.

Quizzes (Individual): 20% of Semester Grade

Eight (8) quizzes are required to test your understanding of the principles, scopes, and areas of sustainability practice. Each quiz is worth 25 points with a total of 200 points (20%) of the total semester grade for all the quizzes. Quizzes are not summative, rather focusses on the contents covered in the weeks preceding the quiz only. You have two attempts to re-take the first quiz, and all other quizzes can only be accessed one time. All quizzes are timed to 30 minutes.

Reflections in Discussion Forums (Individual): 20% of Semester Grade

There are eight (8) discussion forums on Canvas for reflections and discussion contributions that are expected to be succinct and relevant to the topic with examples, whenever possible. You can earn up to 25 points for each reflection (a total of 200 points, or 20% of total semester grade) for all contributions. Forums are intended to initiate student engagement with other classmates to emulate in-person class discussion. Engagement includes, liking and commenting on other student contributions and provide professional and respectful viewpoints. Students will be evaluated on the quality, insight, accuracy, and supportive evidence to their contributions as relevant to each module.

Term Project Presentations (Groups): 15% of Semester Grade

The Term Project will be developed based on three main phases; each will be presented in class by the project team. Presentations will be cumulative and the last presentation sums up all modules and materials covered in class.

Term Project Report (Groups): 25% of Semester Grade

The Term Project is a significant checkpoint in the course. It is your opportunity to demonstrate that you have a firm grasp of the foundations and scope of sustainability profession and community development. The final project is conducted in teams of 5-6 students each and is awarded up to 250 points (25%) of the final grade. The semester project will focus on sustainable intervention solutions and programs for Gainesville historic neighborhoods. Detailed will be

available on Canvas. Each group will be required to present their ideas and progress of the project several times throughout the semester and each member of the team will conduct a peer-review for all team members. Several incremental reports will also be submitted for grading and feedback to help with building the cumulative final report. Grading rational and evaluation rubric will be available on Canvas Final Project Module.

UNIVERSITY POLICIES

Student Responsibilities

As a student at the University of Florida, you have committed yourself to uphold the *Honor Code*, which includes the following responsibilities as delineated at <https://catalog.ufl.edu/UGRD/student-responsibilities/>.

- Academic Honesty
 - Preamble
 - The Honor Pledge
 - Student Responsibility
 - Faculty Responsibility
 - Administration Responsibility
- Student Conduct Code
- Alcohol and Drugs
 - What the University Community Can Do to Prevent Alcohol Abuse and Drug Abuse
- Relations Between People and Groups
- Service to Others
- Standard of Ethical Conduct

Software Use

All faculty, staff and students at the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. As such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Students with Disabilities

Students requesting accommodation for disabilities must first register with the Disability Resource Center (DRC). The DRC coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services, and mediating faculty-student disability related issues.

Upon registering, the DRC will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation **prior to submitting assignments or taking quizzes or exams**. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. The DRC may be contacted by visiting 001 Reid Hall, calling 352-392-8565, or viewing www.dso.ufl.edu/drc/.

Religious Observances

Please inform the instructor of any religious holidays or other days of special religious significance that may interfere with your participation in this class so that appropriate accommodation can be made.

Sexual Harassment

Sexual harassment is reprehensible and will not be tolerated by the University. It subverts our academic mission and threatens the careers, educational experience, and well-being of students, faculty, and staff. The University will not tolerate behavior between, nor among, members of this community that creates an unacceptable working environment.

Special Consideration

The principle of equal treatment of all students is a fundamental guide in responding to requests for special consideration. No student shall be given an opportunity to improve a grade that is not made available to all members of the class. This policy is not intended to exclude reasonable accommodation of verified student disability, or the completion of work missed due to religious observance, verified illness, or absence due to circumstances beyond your control. Reconsideration of subjective judgments of a student's work will be done only if all students in the class can be and are given the same consideration.

Campus Accessibility Considerations

When driving onto campus, be aware of parking decal restrictions and visit <http://www.parking.ufl.edu/>. When riding transit or using other available commuting methods, visit <http://parking.ufl.edu/transit-commuting/>.

HELPFUL CAMPUS RESOURCES

Academic and Professional

- *E-Learning Technical Support*, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://elearning.ufl.edu/student-help-faqs/>
- *Library Support*. Provides various ways to receive assistance with respect to using the libraries or finding resources.
<http://cms.uflib.ufl.edu/ask>
- *Teaching Center*, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>
- *Writing Studio*, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<http://writing.ufl.edu/writing-studio/>
- *UF Information Technology | Computing Help Desk*, 352-392-HELP (4357) or e-mail to helpdesk@ufl.edu
<http://helpdesk.ufl.edu/>
- *Career Connections Center*, Reitz Union, 352-392-1601. Career assistance and counseling. <https://career.ufl.edu/>

Health and Safety

- *Dean of Students Office*, 202 Peabody Hall, 352-392-1261. Among other services, the DSO assists students who are experiencing situations that compromises their ability to attend classes. This includes family emergencies and medical issues (including mental health crises). <https://www.dso.ufl.edu/care>
- *Sexual Assault Recovery Services (SARS)*, Student Health Care Center, 352-392-1161. Sexual assault counseling.
- *Student Health Care Center*. Call 352-392-1161 for 24/7 health care information. <https://shcc.ufl.edu/>
- *UF Health Shands Emergency Room / Trauma Center*, 1515 SW Archer Road, Gainesville, FL 32608, 352-733-0111. For immediate medical care call or go to the emergency room. <https://ufhealth.org/emergency-room-trauma-center>
- *U Matter, We Care, U Matter*, multiple locations, 352-392-1575. If you or someone you know is in distress, please contact umatter@ufl.edu or visit the website to refer or report a concern and a team member will reach out to the student in distress. <https://umatter.ufl.edu/>
- *University Counseling Center & Wellness Center*, 3190 Radio Rd., 392-1575. Personal and career counseling, as well as therapy for anxiety, stress, and mental health issues. <http://www.counseling.ufl.edu/cwc/>
- *University Police Department*, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

DCP 3210: COURSE SCHEDULE*

Detailed weekly plan, readings, quizzes, and course content will be available on Canvas throughout the semester and will be announced in class.

DATE	MODULE	DETAILS	SUBMISSIONS
<u>Week 1</u> R: 8/24	Module (1) Introduction to Sustainability	Lectures: Course overview; syllabus; UF resources & policies. What is sustainability; Why you study sustainability? Introduction to UN Sustainable Development Goals (SDG). And Introduction to Drawdown and sustainability.	On Canvas Quiz 1 (Sunday, 11:59 PM) Reflection 1 (Sunday, 11:59 PM)
<u>Week 2</u> R: 8/31		Field Visit: Neighborhood Tour/ Audit/ Assessment INTRODUCING THE TERM PROJECT: (A Retrofit Prototype for Neighborhood Resiliency & Sustainability) Meeting at Thomas Center, Gainesville, FL	On Canvas Quiz 2 (Sunday, 11:59 PM) Reflection 2 (Sunday, 11:59 PM)
<u>Week 3</u> R: 9/7	Module (2) Global Challenges	Lecture: Systems thinking, and food system Discussion: Group activities and engaging exercise	On-Canvas Project Team Names (Sunday, 11:50 PM)
<u>Week 4</u> R: 9/14	Module (3) System Thinking	Lecture: Biophilic Design, Smart Cities, LEED for ND, LEED for Cities, Green Buildings, and Living Building. Discussion: Group activities and engaging exercise	On Canvas Quiz 3 (Sunday, 11:59 PM) Reflection 3 (Sunday, 11:59 PM)
<u>Week 5</u> R: 9/21	Module (4) Sustainable Development Strategies	Lecture: Land Use/ Zoning; Sustainable Communities, New Urbanism, Multi-modal transit, Conservation subdivision, and Urbanization/ Smart Growth Presentations-1 (Groups): Identifying and quantifying neighborhood problems/ results of neighborhood audit	On Canvas (Sunday, 11:59 PM) ▪ Presentation-1 (PDF) ▪ Draft Report-1 (PDF)
<u>Week 6</u> R: 9/28		Lecture: Sustainable Sites and Landscape (Landscape and Irrigation, Stormwater management, Green Infrastructure, Xeriscaping, Afforestation, Urban Heat Island (UHI), and site lighting).	On Canvas Quiz 4 (Sunday, 11:59 PM) Reflection 4 (Sunday, 11:59 PM)
<u>Week 7</u> R: 10/5	Module (5) Water Systems	Lecture: Water Conservation (inside and outside), Net zero water, WaterSense, and Wave and Tidal. Discussion: Group activities and engaging exercise	On Canvas Quiz 5 (Sunday, 11:59 PM) Reflection 5 (Sunday, 11:59 PM)
<u>Week 8</u> R: 10/12	Module (6) ST- 3: Energy Systems & Atlanta Fieldtrip	Lecture: Energy Conservation and Efficiency, Affordable and clean energy, Net zero energy, Building envelope, and Mechanical and electrical systems. Presentations-2 (Groups): Resilience Analysis, Metrics, and Improvement Plan ATLANTA FIELD TRIP (REQUIRED): (R 10/12 to S 10/14): Cost per Student [\$260 to \$330] + Meals on your own (2 Dinners+ 3 Lunches)	On Canvas (Sunday, 11:59 PM) ▪ Presentation-2 (PDF) ▪ Draft Report-2 (PDF)
<u>Week 9</u> R: 10/19		ATTENDANCE (REQUIRED): GBLC CONVOCATION: WED 10/18 (4:30 – 6:30 PM) Lecture: Renewable energy systems (Solar farms, Refrigerant management, Wind turbine, Geothermal) and Commissioning. Discussion: Group activities and engaging exercise	On Canvas Quiz 6 (Sunday, 11:59 PM) Reflection 6 (Sunday, 11:59 PM) Extra credit: GBLC Assignment (Sunday, 11:59 PM)
<u>Week 10</u> R: 10/26	Module (7) ST-4: Indoor Environmental Quality	Lecture: Indoor Environmental Quality, daylight and views Guest speaker: Amanda Polematidis, TLC [Tentative]	In-class Review Term Project (Groups): Detailed outline, introduction, and methods

<u>Week 11</u> R: 11/02	Module (8) ST-5: Embodied Carbon	Lecture: Interior material use, Embodied carbon, Waste management, Circular Economy, Consumption and production, and Eco building material. Guest speaker: Jeffrey Forbes [Tentative]	On Canvas Quiz 7 (Sunday, 11:59 PM) Reflection 7 (Sunday, 11:59 PM)
<u>Week 12</u> R: 11/09	Module (9) ST-6: Social Sustainability & Vulnerability	Lecture: Equity for vulnerable residents, equality vs. equality, defining vulnerable population, protected class (per federal government), women and girls' empowerment Discussion: Group activities and engaging exercise	On Canvas Quiz 8 (Sunday, 11:59 PM) Reflection 8 (Sunday, 11:59 PM)
<u>Week 13</u> R: 11/16		Lecture: Climate Action Plans, equity indicators, resilient design, mitigation and adaptation, Climate Action Plan, and Regenerative Agriculture. Discussion: StoryMap tutorial and exercise	In-class review of Presentation Outline and ideas
<u>Week 14</u> R: 11/23	THANKSGIVING BREAK (NO CLASSES)		
<u>Week 15</u> R: 11/30	Module (10) Final Project	<ul style="list-style-type: none"> Group meetings with instructors [Review of report and presentation] 	Students are required to attend these group meetings and to prepare the required materials (per detailed project description)
<u>Week 16</u> R: 12/06		In-class Presentation: Final Presentation of Term Project (all groups) On Canvas: Sunday 12/10 (@11:59 PM) <ul style="list-style-type: none"> Final Cumulative Report [PDF only] Final Presentation [Selected media by students] Peer-review Forms [Excel file only] 	

**Disclaimer: This schedule represents the basic and prospective plans and objectives for this course. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*

Reading Days (No Classes): Thursday and Friday, **December 7 - 8.**