SYLLABUS
LBST 2101 section 135.
Western History & Culture: Urban Sustainability, Fall 2015
Tuesday & Thursday, 11am-12:15pm, room 236 Kennedy

Instructor: Dr. Robert Boyer, Assistant Professor [rboyer1@uncc.edu]
Teaching Assistant: Jon Freeman [jfreem60@uncc.edu]

COURSE DESCRIPTION

Most humans alive in 2015 live in or near cities. This has not always been true. About eight years ago (sometime in the year 2007) humanity transitioned from a majority 'rural' species to a majority 'urban' species, and we are just discovering new and unexpected consequences and opportunities of *global urbanism*. Ironically, while humans have begun to cluster closer together in cities, we are also importing food, material, and energy from farther away, commuting longer distances to work, and our activities are influencing the health and wellbeing of individuals on the opposite side of the planet. This is especially true in North American cities that require vast quantities of material and energy from all corners of the earth. In fact, if everyone on earth lived like the "average" North American, we would need five earths-worth of material and energy to survive.

Obviously, not everyone on earth can adopt the contemporary American lifestyle—the planet would quickly run out of "stuff" to consume, but nations around the world are working hard to accumulate the wealth, comfort, and industrial power of North American and Western European nations. What are the consequences of unsustainable and inequitable consumption? Is it fair that the USA can enjoy such a high standard of living at such high environmental costs? What actions can city planners and political leaders take to maintain a high quality of life without further damaging the earth's finite ecosystems or consuming global resources at an unsustainable rate?

Throughout the course, we will travel through space and time to better understand how cities grow and operate, why some cities are more prosperous than others, and the challenges that all cities will face in the coming decades. We will ask why are certain cities and regions more sustainable than others, and how can city planners and leaders avoid the uncomfortable and sometimes painful decisions that accompany resource shortages and social conflict?

We will visit rich nations and poor nations; complex metropolitan regions and small rural villages; we will visit the oil fields of the middle east and the coal mines of West Virginia; we will visit early 20th century Los Angeles to understand how the automobile has re-shaped the places we live; the wheat fields of Oklahoma; and one of America's first cookie-cutter subdivisions on Long Island; we will meet residents of the poorest neighborhoods of Boston, New York, and Latin America; we will ride the bus rapid transit systems of Curitiba (Brazil) Bogota (Colombia) and Malmö (Sweden); we will

explore Germany's vast and inter-connected transit system; discover new ways of overcoming drought in Texas, and ecovillages around the world.

Team-Based Learning
Working and learning in teams is a critical component of this course. It is also a critical skill in most contemporary workplaces. Early in the semester, you will be assigned to a permanent team of 5-6 members. We will form teams in class, using a process that balances skills and experience across teams. You will work with your assigned team in almost every classroom session, and will likely meet with your team outside of class from time to time. Teams will collaborate on "Readiness Assurance Tests" (RATs), Application Exercises, and several larger projects. Your team can also serve as a de-facto study group for exams. At multiple points in the semester you will provide and receive qualitative feedback from your teammates.

COURSE STRUCTURE

The course is divided into three major units**:**

Unit I: Global Trends in Urban Sustainability
We spend the first few weeks of the course exploring 'big' concepts and global-scale trends. We will discuss atmospheric and geologic cycles, the greenhouse effect, the history of human settlements, climate change, and ecological footprinting. We explore why most humans (a little more than 50 percent) alive today live clustered together in cities rather than spread out evenly across the landscape; we will explore what it means for a place to be "urban" and "sustainable," why almost all cities are un-sustainable in their current form, and why *better* cities are humanity's best hope for long-term survival. This unit concludes with an exam on October 1st.

Unit II: Regional land use, transportation, and social justice.
In the second unit of the course we focus on urban systems at the regional scale. Urban regions are bigger than cities, but share many of the same characteristics including dense human populations, land use systems, transportation systems, and vast networks for distributing electricity, water, food, solid wastes and other goods. We'll spend time learning about different ways to define a region, and we'll discuss how and why they grow. We'll also discuss the benefits and burdens of regional growth, what it means for a region to "sprawl" and tools that urban planners use to shape growth. This unit concludes with an exam on November 5th.

Unit III: Water systems, buildings, and cooperative governance
The third unit of the course is devoted to understanding issues of water conservation and provision, energy conservation in buildings, and social conventions that can help communities thrive amidst self-imposed limits to consumption. We will discuss watersheds, "watershed democracy", and energy-saving techniques that can be incorporated into buildings, in addition to micro-electricity sources like solar photovoltaics and wind. We will also discuss how social mechanisms—the way that

individuals choose to relate to one another—is critical to sustainability at the local, regional and global scales.

Course Objectives
By the conclusion of this course, students should be able to:

- Understand and articulate the consequences and challenges of urbanization around the world
- Understand and articulate the challenges and opportunities of Sustainable Development
- Understand and articulate the causes, consequences, and potential solutions to global issues like climate change
- Understand and articulate how and by whom decisions about the environmental are made at different geographical scales
- Understand and articulate smart practices in urban planning and design that mitigate environmental problems.
- Use online data portals to compare environmental problems in different places
- Communicate and collaborate well on a small team

Required Readings

This course has no textbook, but nearly every class will require you to complete readings or explore some other type of media outside of class. Readings are downloadable as PDFs or accessible as weblinks from the course's Moodle2 page (https://moodle2.uncc.edu/login/index.php) Many reading assignments are not actually readings, but rather require you watch a video. Videos should be treated as critically and carefully as texts. The course schedule (below) details when students should complete specific reading assignments.

Course Schedule

Class meets every Tuesday and Thursday, 11-12:15, with several exceptions:

- Tuesday, October 13, there is a campus-wide student recess. We will not have class on this day.
- Tuesday, November 17, you will have time to work with your group on a neighborhood observation assignment. You must check in as a team at the beginning of class, but you can work wherever your team prefers.
- Thursday, November 27 is Thanksgiving Day. We will not have class on this day. We will have class on Tuesday of that week.

Mo	D	Topic	In class	Reading/listening material
Aug	25	Introduction	Review syllabus and expectations.	
	27	Team-Based Learning.	Create teams + RAT.	This American Life episode 370, "Ruining it for the rest of us (first twelve minutes only)"

Sep	1	Global urbanism and urbanization.	Data management tutorial +worksheet	Kingsley Davis, "Urbanization of the Human Population"
	3	Sustainability and Sustainable Development	Team exercise	• Richard Smith lecture "Population, Politics and the Environment" • Scott Campbell, Green Cities, Growing Cities, Just Cities.
	8	Environmental debates, and perspectives on sustainability.	Lecture + worksheet.	• David Orr, "Two Sustainabilities" • Vermont Public Radio, "Muir vs. Pinchot"
	10	The Tragedy of the Commons, Common Pool Resources	RAT#1	• Garrett Hardin, "The Tragedy of the Commons" • Eric Freyfogel, "The Lure of Privatization" • The Onion, "Everyone in the Middle East Given their own Country"
	15	Climate change: Causes and evidence	Guest lecture: Professor Brian Magi	• Gelbspan Intro + Ch1: Not just another issue; • "Up to 5 billion face entirely new climate by 2050"; • Climate Change Threatens Chinese Building Projects • SKIM Summary for Policy Makers, IPCC 5th assessment report
	17	Climate Change: Global Energy Sources. How do different countries compare?	Team Exercise. Energy Source Playing Cards	Marshak Chapter 14, "Squeezing power from a stone: energy production"
	22	Climate Change: How do different cities and regions in the USA compare?	Team Exercise. Explore data at home (CNT H+T index).	(Bring laptops to class. Tablets and other mobile devices are OKAY too, but laptops preferable.)
	24	Climate Change: Policy approaches, policy solutions.	RAT#2	• "Paris cannot be another Copenhagen." • "Hague decision could be a global movement" • "California governor calls for drastic reductions in GHG gas emissions by 2030"
	29	Measuring Sustainability: Ecological Footprint	In-class discussion about ecological footprinting. Be sure to bring completed ecological footprint assignment.	• Overshoot Day arriving earlier each year • Wackernagle & Rees. What is ecological footprint? • Ecological footprint at-home activity.
Oct	1	**Exam 1.**	**exam**	
	6	Regional Land Use: The causes of sprawl	**Introduce case study project.	• Dolores Hayden Chapters 1-2; • Teresa Wiltz, "Returning to the exurbs"
	8	Regional Land Use: The consequences of sprawl	RAT#3	•Kenneth Jackson, America's Drive-In Culture

	13	NO CLASS. STUDENT RECESS.		
	15	Regional Land Use: Reversing Sprawl	Lecture + worksheet	Ewing et al. 2007, Growing Cooler executive summary.
	20	Regional Land Use: Social justice and equitable solutions.	Team exercise, Data exploration (EJ Screen)	• Majora Carter, "Greening the Ghetto" TED lecture; • "Tax on Blackness"-racism in real estate discrimination
	22	Environmental Justice	Watch "Holding Ground" documentary + worksheet	
	27	Housing and Land Use Alternatives	Lecture + Worksheet	**Case study **proposal** due. • Bofaellskaber to cohousing • Visit EcoVillage at Ithaca Website
	29	Transportation Alternatives	RAT#4	Bus rapid transit documentaries about Curitiba, Brazil and Bogota, Colombia. Links posted on Moodle.
Nov	3	Transportation Alternatives	Lecture + worksheet	• Fifty years of bicycle policy in Davis, CA • Why bicycles are great for everyone, not just cyclists
	5	**Exam 2**	**exam**	
	10	Regional Water Issues: Watersheds	Lecture + worksheet	• Worster, Donald. "Watershed Democracy: recovering the lost vision of John Wesley Powell" • Pittman, Craig. 2012. Water War, Southern Style • Colorado River Drought Forces Painful Reckoning for States • Effort to divert water from Lake Michigan sets of fierce debate
	12	Regional Water issues: alternative technologies	RAT#5	•Timothy Egan, "The end of California" • Wichita Falls Texas…drinking toilet water?; California drought article.
	17	Teamwork day		
	19	Energy Efficient Buildings	RAT#6	• Building with awarness (4 videos) • BedZED (6 videos)
	25	Micro-Energy Alterantives	Team exercise	
	27	NO CLASSES, THANKGIVING		
Dec	1	Cooperation and social sustainability	Lecture + worksheet.	Lessons from Seoul's two sharing economies.
	3	Poster Session		
	8	Wrapping up and review.		
	15	**FINAL EXAM**	exam	

Evaluation

This course is divided into 500 points. Students will be evaluated on a mix of objective quizzes, exams, short exercises, and a team case study.

Assignments	Percent of Final Grade
Exam 1 (Oct 1), 75 pts	15
Exam 2 (Nov 5), 75 pts	15
Final Exam (Dec 15), 75 pts	15
Readiness Assurance Tests, 20 pts each →100 pts total*	20
Team exercises and worksheets, 5 pts each → 70 pts*	14
Team case study + poster, 105 pts	21

*your lowest total RAT (iRAT+tRAT) score and lowest worksheet score will be dropped.

Exams (45 percent of final grade)
Exams are semi-cumulative. While each will focus primarily upon material presented after the prior exam, your answers may require that you articulate connections to concepts and facts discussed earlier in the course. Exams will consist of a mix of objective and free-response questions, and will be taken independently in class.

Readiness assurance tests or RATS (20 percent of final grade)
RATs are 10-question quizzes that take place six times in the semester. RATs test basic knowledge of the required readings and lectures and can be easily passed if you complete the readings and attend lectures. You will take each RAT as an individual (iRAT) and re-take the identical RAT with your team (tRAT). Individual and team scores have equal weight in your final RAT grade.

RAT Appeals Process
Teams have 24 hours to appeal answers marked incorrect on their RATs. Appeals must express a specific concern with a question on the RAT, and offer evidence (e.g. a page number and quotation in a required reading) that a different answer was equally or more appropriate. Appeals can also be issued if a RAT question was poorly worded or somehow misleading. Such an appeal must explain why the particular question was misleading, and where it 'led' your team. Appeals must follow these instructions precisely:

- Submit an appeal as a single e-mail to the instructor within 24 hours of the completion of the class session (i.e. before Saturday 4:45pm).
- The e-mail must have the subject line "RAT APPEAL, GEOG3215, <TEAM NAME>, DD/MM/YYYY".

- Team members will only receive credit for the appeal if their e-mail address is copied to the e-mail.
- Teams may appeal more than one question per class session, but can only make 5 total appeals in the semester.

Team exercises and worksheets (14 percent of final grade)
Through the semester, you will submit worksheets individually, and complete exercises as a team. At the end of these classes, you will submit the associated worksheet, and receive full credit if it is complete. These worksheets serve as the *de facto* attendance process for class. If you do not attend class *and* submit your worksheet, you will not receive credit.

Case Study Poster, December 3 (21 percent of final grade)
At the end of the semester, your team will create a poster or video presentation based on a sustainability case study. This study will tell the story of a community or larger organization that has developed a creative solution to a complex sustainability dilemma. Teams will be offered a small list of possible case studies, although they are not limited to this list. Teams will also submit a case study proposal on October 27. This proposal must be approved by the instructor, and offers teams an opportunity to consult with the instructor about case study project ideas. The final poster grade will combine instructor and classmate evaluation, and the poster with the highest classmate evaluation will receive extra credit.

Extra credit
I will administer several unannounced 10-point extra-credit quizzes throughout the semester. These quizzes will be based on material in the required readings, and will be administered at the beginning of the class period. Students who are absent or late for class forfeit these extra credit opportunities.

Office Hours

Professor Boyer: Tuesday 1-3, McEniry 312, or by appointment.
Jon Freeman: Wednesday 12-1:30 McEniry 430.

Students are encouraged to take advantage of office hours to discuss course material and requirements. If you are not available to meet at either of the times listed above, I encourage you to e-mail either the TA or me with suggestions of an alternative time to meet.

Attendance

I believe that meeting as a class and learning together is a luxury. It is expected that students want to be in class, for the entire 75 minutes. Most classes have some *de facto* form of attendance verification, (e.g. submitting a RAT or a worksheet). If you do not attend class and do not complete the assignment, you will not receive credit for this assignment. Your lowest RAT score and your lowest worksheet score will be dropped from each category, effectively allowing students two "un-excused" absences. I highly

encourage students to attend every class, however, as knowledge in each class will be integral for subsequent exams. If you are experiencing any a health-or-family related emergency that requires your prolonged absence from class, please schedule a time to meet with the instructor to discuss alternative assignments. Students that miss class due to illness or emergency are highly encouraged to visit office hours to discuss the missed material.

Cell Phones, Laptops, and other electronic media

Cell phones must be silenced and put away during class. The same rule applies to laptops, tablets, and other electronic media, unless we are using these devices for activities in class.

Special Circumstances

Every effort will be made to work with students with unusual or unexpected obligations outside the course. Students with disabilities or special needs who require accommodations to facilitate full participation and completion of the course should arrange with UNCCs Office of Disability Services to contact the instructor as soon as possible.

*This syllabus and the course schedule are subject to changes throughout the semester. Students will be notified, if not consulted directly, about syllabus changes.