**Transforming Cities: Smart Cities and Technology  
Carnegie Mellon University and the University of Pittsburgh**

**Instructors:**

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**Class Sessions**:

Friday, March 20, 2020 – 5:00PM – 8:00PM

Saturday, March 21, 2020 – 8:30AM – 6:30PM

Sunday, March 22, 2020 – 8:30AM – 1:00PM

**Class Location:**

[Hall of Arts](https://www.cmu.edu/computing/services/teach-learn/tes/classrooms/locations/hoa.html) (HOA) 160, Carnegie Mellon University

**Course Description**

Due to economic development and globalization, cities continue to grow with predictions that 70 of the world’s population will live in urban areas by the year 2050. This course, then, will view cities as hubs where patterns, connections, discussions, and the processes shape such issues as social justice, economic development, technology, migration, the environment among others. By examining cities as a lens, this sequence of weekend courses encourages students to examine cities as a system for discussing social processes being built and rebuilt. With an interdisciplinary focus, the course invites experts from the University of Pittsburgh, Carnegie Mellon, and relevant fields more broadly.

This iteration of the course will explore such topics as: the influence of multinational corporations on cities; the rise of privacy issues in relation to adoption of technology within cities and homes; the replacement of human labor and access to employment; the role of technology on urban planning, among others.

One-credit for PITT students / 3 units for CMU students is provided for the completion of each iteration of the mini-course. This means that students are expected to complete a total of 45 hours of work for the course. The weekend accounts for 15 contact hours. This creates the expectation that you spend approximately 30 hours outside of the course on the pre-course and post-course surveys as well as two assignments (*Planning a Global City Analysis Paper* and *Global City Analysis Paper*).

**Objectives**: By the end of the course, students will be able to:

* Identify and define the characteristics of smart cities and their technology (*Worksheets*);
* Identify and compare dimensions of the benefits and risks associated with smart cities and their technology (*Worksheets*);
* Compare disciplinary approaches and perspectives on smart cities (*Comparison Worksheet*);
* Evaluate how technology impacts various socio-political issues occurring within smart cities (*Worksheets and Global City Analysis assignments*);
* Use key concepts articulated in the course to identify a global city to analyze its relationship to social issues related to smart cities and technology (*Worksheets and Global City Analysis assignments*).

**Course Materials**

* All course readings will be posted to Blackboard (CourseWeb)/Canvas.
* In addition, multiple assignments will be posted and turned in via Blackboard (CourseWeb)/Canvas.
* Students will be expected to regularly check Blackboard (CourseWeb)/Canvas for announcements and most assignment feedback.

**Course Policies:**

[**Late Assignments**:](http://www.indiana.edu/~deanfac/download/holidayreq.html) The *Planning a Global City Analysis Paper* and *Global City Analysis Paper* assignments will face a penalty of *10% for each day* (a 24-hour period beyond the deadline) the assignment is late. This means that if your assignment is an hour late (or even 23 hours and 59 minutes late) it will face a 10% deduction. A new penalty will occur at 8AM for the *planning the policy memo assignment* and midnight for the *policy memo assignment* of each day it is late, i.e. if the assignment is 25 hours late then it will face a 20% deduction, 48 hours will face a 30% deduction, etc.

*All other course assignments, including the course pre-and post-surveys and the various worksheets, must be completed by their due date or prior to the next session to receive credit.*

**Assignment Extension Requests:** It is your responsibility to contact us regarding any special circumstances that may affect your ability to complete the *Planning a Global City Analysis Paper* and *Global City Analysis Paper* assignments before the due date. If you are not going to complete the assignment in time, then you may request an extension without a late penalty. We will respond to requests for an extension on a case-by-case basis. Extensions, though, will only be considered a viable option *up to 24 hours before* the assignment is due. Once you are within 24 hours of the due date or past due, the assignment will face the penalty outlined above.

[**Academic Integrity**](http://www.indiana.edu/~deanfac/download/holidayreq.html): Any work that you submit should be your own work (i.e., not borrowed/copied from any other source, including our assigned readings and your classmates). When using other people’s ideas to substantiate your own, please properly cite the original source. We will review proper citation procedures in class, and you should ask for clarification whenever needed.

Any act of cheating or plagiarism will be treated in accordance with Carnegie Mellon’s Policy on Academic Integrity, which can be found here: <http://www.cmu.edu/policies/student-and-student-life/academic-integrity.html> as well as the University of Pittsburgh’s Academic Integrity Guidelines, which can be found here: <https://www.provost.pitt.edu/faculty/academic-integrity-freedom/academic-integrity-guidelines>. Depending upon the individual violation, students could face penalties ranging from failing the assignment to failing the class.

[**Grading**](http://www.indiana.edu/~deanfac/download/holidayreq.html): Assignments will be assigned a number grade. Discussions regarding grades must take place face-to-face, in person, during office hours or by appointment. [*No discussions regarding grades will take place via email*](http://www.indiana.edu/~deanfac/download/holidayreq.html). No grades will be discussed within 24 hours after the graded assignment is returned to the class; no grades will be discussed more than one week after the graded assignment is returned to the class.

**Accommodations for Students with Disabilities:** If you have a disability and have an accommodations letter from the Disability Resources office, we encourage you to discuss your accommodations and needs with us as early in the weekend (before the weekend starts is preferable) as possible. We will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would benefit from accommodations but are not yet registered then we encourage you to contact Disability Resources ([access@andrew.cmu.edu](mailto:access@andrew.cmu.edu) or [drsrecep@pitt.edu](mailto:drsrecep@pitt.edu)).

**Mental Health:** As a student, you may experience a range of challenges that can interfere with learning, such as strained relationships, increased anxiety, substance use, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may diminish your academic performance and/or reduce your ability to participate in daily activities. CMU and Pitt services are available, and treatment does work. You can learn more about confidential mental health services available at CMU (<http://www.cmu.edu/counseling/>) and at Pitt (<https://www.studentaffairs.pitt.edu/cc/>). Support is always available (24/7) from Counseling and Psychological Services for CMU students at 412-268-2922 and from University Counseling Center for Pitt students at 412-648-7930.

**Technology**: It is assumed that each student enrolled in this course owns or has access to a personal computer, complete with printer and high-speed access to the Internet. We all depend on machines to get our work done. We all know that machines break down or crash. When they do, it does not constitute an “excuse” or “emergency.” We expect that you will prepare your assignments and presentations far enough in advance so that when your computer or Canvas/Blackboard malfunctions you will be able to rectify the problem and turn in the assignment in on time.

**Research to Improve the Course:** For this course, we are conducting research on student learning.  This research will involve your coursework. You will not be asked to do anything above and beyond the normal learning activities and assignments that are part of this course. You are free not to participate in this research, and your participation will have no influence on your grade for this course or your academic career at CMU. If you choose not to participate in the research, you must still complete all required coursework, but your data will not be included in the research analyses. Participants will not receive any compensation. The data collected as part of this research will include student grades. All analyses of data from participants’ coursework will be conducted after the course is over and final grades are submitted. The Eberly Center may provide support on this research project regarding data analysis and interpretation. To minimize the risk of breach of confidentiality, the Eberly Center will never have access to data from this course containing your personal identifiers. All data will be analyzed in de-identified form and presented in the aggregate, without any personal identifiers. Please contact Dr. Chad Hershock (hershock@cmu.edu) or one of your instructors if you have questions or concerns about your participation.

**Course Grading:**

Final grades will be assigned based on the chart below.

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| --- | --- | --- |
| **A**: 500-465 | | **A-**: 464-450 |
| **B+**: 449-435 | **B**: 434-415 | **B-:** 414-400 |
| **C+**: 399-385 | **C**: 384-365 | **C-**: 364-350 |
| **D+**: 349-335 | **D**: 334-315 | **D-**: 314-300 |
| **F**: 299 and lower | | |

Final Grades are based on multiple dimensions:

**Course Pre- and Post-Survey (10% / 50 points) –** Students will be required to complete the pre-course survey by **5:15pm on Friday, Mar. 20th**. The post-course survey is due by **midnight on Friday, Apr. 24th**. Both surveys will be accessible via the Assignments tab in Canvas/Blackboard. They will *open at 8am* on the Monday prior to their due date (*Mar. 16th* and *Apr. 20th* respectively). Students will receive completion points for this component as long as they have provided a complete response following the survey directions. Student identification will be taken to allow for credit of completion, but the survey responses will not be evaluated until after course grades are submitted. A third party will provide your name and confirmation of completeness to keep anonymity in relation to responses.

**Attendance (12% / 60 points) –** Due to the immersive nature of the course, students are expected to attend all sessions on all three days. Each session is worth 5 points. There is a total of 12 sessions. If you arrive 15 minutes late for any session or leave early you will not receive the 5 points for attendance.

**Lecture and Workshop Worksheets (18% / 90 points) –** After each lecture, you are required to answer a set of questions about the lecture and their application to course objectives. During the workshop periods, you are expected to complete the worksheet, which you will turn in at the end of each workshop time period. Each worksheet after a lecture or workshop session (9 total) is worth 10 points. These worksheets are due before the next lecture begins. For worksheets at the end of the day, these are due before leaving class.

**Comparing Disciplinary Perspectives Worksheet (5% / 25 points)** – The final comparison worksheet (completed on Sunday morning – see schedule below) is worth 25 points. This worksheet will need to be completed before leaving class on Sunday, Mar. 22nd.

**Practicing Community Discussions on Smart Cities and Technology: A Case Study Activity (5% / 25 points)** – This activity will occur on Sunday morning (see schedule below). Students will be broken into small groups and asked to partake in a role playing activity which explores issues from the course in a concrete scenario. After engaging in the activity, the class will discuss the varying experiences in their groups as they arrived at recommendations on the issues. Students will be asked to complete a reflection worksheet, which will comprise the grade for this component. Students will need to be present for the entire discussion to adequately complete the worksheet. *Note: Students arriving late will not be able to complete the assignment sheet associated with this activity. Please arrive on time to be assigned a group and case study.*

**Planning a Global City Analysis Paper (10% / 50 points) – Due Monday, March 30th by 8AM** – Each student will select a global city within the top 100 of the A. T. Kearney [Global Cities Index](https://www.atkearney.com/documents/20152/1136372/2018+Global+Cities+Report.pdf/21839da3-223b-8cec-a8d2-408285d4bb7c) (use p. 14 for this possible list) and begin planning their global city analysis paper by completing the posted worksheet on Canvas/Blackboard. *Feedback on this assignment will be returned by Friday, April 10th*.

**Global City Analysis Paper (40% / 200 points)** **–** **Due Wednesday, Apr. 22nd by midnight** - Each student will use the global city that they identified in their Planning of a Global City Analysis Paper assignment. This assignment will ask students to write a paper (1500-1800 words) aimed at policymakers with a clear purpose to analyze the key issues facing the global city selected. The more in-depth assignment description, rubric, and sample paper will be posted on Blackboard/Canvas.

**Weekend Schedule**

***Friday, March 20, 2020***

**5:00PM-5:15PM**: Welcome Remarks and Overview of Course  
**Session 1 - 5:15PM-6:30PM**: [Whitney Laemmli](https://www.cmu.edu/dietrich/history/people/faculty/laemmli.html), Assistant Professor, Department of History, Carnegie Mellon University  
**Session 2 - 6:45PM-8:00PM**: [Sarah Fox](https://www.sarahfox.info/), Presidential Postdoctoral Fellow, Human-Computer Interaction Institute, Carnegie Mellon University

***Saturday, March 21, 2020***

**Session 3 - 8:30AM-9:30AM**: Overview of Writing a Global City Analysis  
**Session 4 - 9:45AM-11:00AM**: Practicing a Global City Analysis (*in Breakout Groups*)  
**Session 5 - 11:15AM-12:30PM**: Panel Discussion:

[Stan Caldwell](https://traffic21.heinz.cmu.edu/about-traffic21/) (chair), Executive Director of Traffic21 and Mobility21 UTC and University Director of State Relations, Carnegie Mellon University;   
[Sean Qian](https://faculty.ce.cmu.edu/qian/), Associate Professor, Department of Civil and Environmental Engineering, Carnegie Mellon University;   
[Alexandros Labrinidis](http://sci.pitt.edu/faculty-and-research/faculty-directory/alexandros-labrinidis/), Professor and Chair, Department of Computer Science, University of Pittsburgh;   
[Katharine Kelleman](https://www.portauthority.org/inside-Port-Authority/leadership/), CEO of the Port Authority of Allegheny County

**12:30PM-2:00PM**: Lunch Break  
**Session 6 - 2:00PM-3:15PM**: [Lorrie Cranor](https://www.cmu.edu/epp/people/faculty/lorrie-faith-cranor.html), Professor, Department of Engineering and Public Policy and School of Computer Science, Director of CyLab Usable Privacy and Security Laboratory, Carnegie Mellon University  
**Session 7 - 3:30-4:45PM**: [Jeremy Crampton](https://www.ncl.ac.uk/apl/staff/profile/jeremycramptonnewcastleacuk.html#background), Professor of Urban Data Analysis, School of Architecture, Planning and Landscape, Newcastle University  
**Session 8 - 5:00-5:45PM**: Presenting Your Recommendations of Global City Analysis (*from Session 4*) to Breakout Groups   
**Session 9 - 5:45-6:30PM**: Analyzing Relationships Between Metrics and Recommendations with Your Morning Breakout Group (*from Session 4 & 8*)

***Sunday, March 22, 2020***

**Session 10 - 8:30-9:00AM:** Comparing Disciplines Worksheet **Session 11 - 9:15-11:45AM**: Practicing Community Discussions on Smart Cities and Technology: A Case Study Activity on Perspectives

*Note: Students arriving late will not receive attendance points nor be able to complete the assignment sheet associated with this activity. This is a total loss of 30 points (6% of course grade). Please arrive on time to be assigned a group and case study.*

**Session 12 - 12:00-1:00PM**: Workshopping the Global City Analysis Paper