CRP 5890: TechniCity

Instructors: Jennifer Evans-Cowley, PhD, AICP (Ohio State University) and Tom Sanchez, PhD (Virginia Tech)

Date/Time: Begins March 4th and runs for 8 weeks (Preview begins February 25th)

Office Hours: Arranged by appointment

Instructor Contact: Cowley.11@osu.edu

NOTE: USE THIS SYLLABUS RATHER THAN THE ONE ON COURSERA AS THIS HAS THE ADDITIONAL REQUIREMENTS FOR STUDENTS ENROLLED FOR CREDIT.

OVERVIEW

We are part of the real-time city. The increasing availability of networks, sensors and mobile technologies allows for new approaches to address the challenges that our cities face. The way we understand cities is undergoing sweeping transformation, right along with the analytical tools we use to design our cities and the communication tools we use to engage people. Absorbing, studying and understanding the role of technology from a critical viewpoint allows us to generate creative ideas for improving our cities. This course begins by examining how the technology in our cities is changing. We then jump into how technology is used to engage with the public to support decision-making. Students will then examine tools for analyzing the city. And rounding out the course is an exploration of entrepreneurial urbanism, looking at how creativity can spawn technological innovation. You’ll hear from technological innovators and thought leaders about all of these topics. Sign up at: https://www.coursera.org/course/techcity

OBJECTIVES

During this course, students will:

- Gain familiarity with fundamental urban technology concepts.
- Increase understanding of how city planners can communicate with the public to enhance cities.
- Gain hands-on experience with public engagement and analysis tools.
- Generate/collect useful data to support informed public policy decisions.
- Describe how key infrastructure technologies shapes cities.
- Accelerate the transfer of ideas between entrepreneurs and urban change agents.
- Develop a solid understanding of how technology is shaping your own city.
COURSE FORMAT

• The course will be delivered fully online and introduces a variety of technologies, combined with hands-on demonstrations.

• Course sessions will be delivered via online lectures with many guest speakers participating. Participants will need access to a computer and an internet connection.

• A major project and peer review will be required. Assignments will also be provided to supplement learning.

• Online engagement with other students is a very important part of the class. You will see that there are multiple platforms for this including Coursera, MindMixer, Google+, LinkedIn, and Twitter.

EXPECTED COURSE EFFORT

Online courses require that you plan your time and effort appropriately so that you can keep up with courses topics, assignments, and discussion. And like traditional classes, we hope that you will also be seeking out external sources of information on topics that you are particularly interested in. The online format of this class encourages sharing of content, so as you find useful resources, please post them using the different channels described in the Virtual Salon. In general, your weekly time spent in the course should look something like this:

- Video lectures 1-2 hours
- Lecture supplements 1-2 hours
- Online engagement 1-2 hours
- Weekly meetups/tweet1 hour
- Assignments 1 hour (averaged over the 8 weeks)
- Peer assessment 1 hour (averaged over the 8 weeks)
- Project Research 1-2 hours (averaged over the 8 weeks)

PLANNING ACCREDITATION CRITERIA MET

The Planning Accreditation Board has a series of standards by which accredited planning programs are measured. Both Virginia Tech and Ohio State University have accredited planning programs. Below is a list of accreditation criteria that are covered in this course.

• Purpose and Meaning of Planning: appreciation of why planning is undertaken by communities, cities, regions, and nations, and the impact planning is expected to have.

• The Future: understanding of the relationships between past, present, and future in planning domains, as well as the potential for methods of design, analysis, and intervention to influence the future.
Global Dimensions of Planning: appreciation of interactions, flows of people and materials, cultures, and differing approaches to planning across world regions.

Research: tools for assembling and analyzing ideas and information from prior practice and scholarship, and from primary and secondary sources.

Written, Oral and Graphic Communication: ability to prepare clear, accurate and compelling text, graphics and maps for use in documents and presentations.

Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.

VIRTUAL SALON

Given the scale of student enrollment, personalized contact with every student will not be possible, but we are designing a number of opportunities for engaging with the instructional team.

- MindMixer will serve as our primary tool for engagement. You will be participating and sharing your ideas, as well as support others in the course.

- Check out the Rewards Store to see what you can earn for your participation. Each week we will add new, exciting rewards.

- Weekly online salons will be offered via WebEx conferencing and Twitter.

- We will respond to messages sent via email to your professor.

- The online discussion forums will be monitored and you are welcome to post questions there, although this is principally for technical questions or questions about your projects.

VIDEO LECTURES

Each week you will be provided with video lectures. These are provided by your instructors and guest lecturers. The videos are divided into three categories. Context lectures provide an introduction to the key ideas that we will be exploring as a class in each week. Case Study lectures provide examples that build on what you have learned in the Context lectures. We also provide Instruction lectures which provide instructions for example on how to complete an assignment.
READINGS

Throughout the course you will be provided with readings and websites that are associated with the lectures. There are links to external resources such as readings, websites, files, and additional videos for further learning. All readings will be provided on Coursera.

GRADING

- Project Proposal and Peer Evaluation of Proposals: 30%
- Final Project and Peer Evaluation of Proposals: 50%
- Blog: 10%
- Participation on MindMixer: 10% (you must earn a minimum of 2,000 points on MindMixer)
- Extra Credit Assignment: Worth up to 5% bonus

LATE POLICY

All assignments are due on time. Late submissions will not be accepted, except in extreme documented circumstances. Students who miss a deadline can choose to complete the extra credit assignment to help make up a portion of the points lost.

ASSIGNMENTS

BLOG

You will be blogging sharing your thoughts on what you are learning about on TechniCity. To facilitate this blogging activity. A Google+ Community (TechniCity OSU-VT) will be used for course discussion with Ohio State University and Virginia Tech students enrolled for credit participating. Each week you will be writing a reflection on the course activities. You can choose to write about the lectures or readings. For example, in Week 1 you could take the reading What Exactly is a Smart City and reflect on what should be included or not in the Smart Cities Wheel. Or you could reflect on D’Hooge’s view of cities from a technologist’s perspectives and how they merge or diverge from your own views of cities.

Blogging Point Structure

3 points for a “substantial” comment or contribution on the weekly topic(s)
2 points, building comment on another student post
1 point for a brief comment or contribution (external resource) on the weekly topic(s)

Q: What are the maximum number of blogging/discussion points available each week?
A: 6. You can earn up to six points from some combination of the above. Students are welcome to contribute more, but the maximum for each week.
Q: What is a “building” comment?
A: A building comment is one that builds on another student’s blog. That is more than I agree or disagree, but continuing to build the discussion. It could refer to an outside resource or source. Examples include links to relevant news articles, publications, videos, web sites, etc.

Q: What qualifies as “substantial”?
A: While subjective, a substantial comment is one that has been given notable thought and effort. This likely cannot happen in 1 or 2 sentences because it should make a particular point or argument drawing upon evidence, examples, or outside references that should be clearly explained. This could take 200-400 words.

Here is an example post that would qualify for three points.
Smart Cities: First Define, Then Engage, Next Implement

“I thoroughly enjoyed the material for Week 1. I particularly found the article by Boyd Cohen titled "What Exactly is a Smart City?" very enlightening and well-organized. As a person who is naturally inquisitive and professionally trained as a research scientist, I could appreciate the level of detail that Cohen provided in his model of defining smart city called "The Smart Cities Wheel". This framework of how to define a smart city is based on six dimensions and within each of those are components that help to better clarify each of the dimensions. I loved the fact that the article addressed the need for pilot programs as an initial first step towards implementation of any new ICT. The main aspect of the Smart Cities Wheel that I most enjoyed reading about was citizen engagement and its necessary role in creating and defining smart cities. The world is diverse and full of new and innovative ideas on ways to make our development and urban planning towards a more inclusive technocratic culture. In my reading for the week, I came across a website called planetizen, and found that the site offers tips on ways to better involve citizens of a particular locale for the purpose of urban development. Overall, Week 1 was a great kick-off to the course with some dynamic readings and multimedia content which I feel lays a solid foundation on which to build smarter cities, with a focus on the notion that cities are dynamic and ever-evolving.”

PROJECT PROPOSAL

Each student will select a topic with which they plan to research. They should identify a problem in their own city that may have a technological solution. This should be a one page assignment. Where possible students should include pictures with captions that describe the problem they want to study. This could be anything from traffic congestion, to pedestrian safety, to water quality to really anything. Students are welcome to work alone or you can team up with one or more other people in the class. On MindMixer we have created a topic for Project Proposals to discuss with others your potential project. If people want to work together on a project this is fine, but please note we will not organize any groups. This would need to be self organized if you wish to pursue this. Some example project proposals are posted on Coursera at: https://class.coursera.org/techcity-003/wiki/view?page=ProjectProposalAssignment.

This project is due by March 25th at 21:00 UTC. This project should take you approximately two hours to complete (more time may be required for you to come up with an idea). You will be copying and pasting your assignment into Coursera or submitting it as a PDF file so keep this in
mind as you prepare your assignment. The rubric for evaluation is posted on Coursera at: https://class.coursera.org/techcity-003/human_grading.

Your grade on the project proposal will be based on the average of your instructor’s grade and the evaluation provided by your peers.

**PEER ASSESSMENT**

Peer assessment is the process students providing feedback to other students according to a rubric that has been developed by the instructors. Once the deadline for the project proposal has passed, you and all the other students will receive five randomly selected proposals from other students in the class. You will be using a rubric the instructors will provide https://class.coursera.org/techcity-003/human_grading. You will then self-grade your own assignment based on the rubric, along with the projects others have submitted. Your grade for the project proposal will be viewable, based on the rubric, once you have completed the peer evaluations.

The peer evaluation of the project proposal is due by April 1st 21:00 UTC. It is very important you provide constructive feedback so that students can improve on their project. Please be polite, detailed, and fair in your evaluation of others work. You should expect to take approximately 20-30 minutes to complete each peer assessment.

You will conduct a similar peer assessment for the final project.

**FINAL PROJECT**

Each student selected a project that you proposed in the project proposal. For the final project you will be following through on your proposal in your city. On the Coursera site see the assignments information tab (on the navigation bar) for more detail. This page includes the core activities for the project report.

This project is due by April 15th at 21:00 UTC. This project will take a variable amount of time depending on the individual project. You are expected to spend substantial time creating something that could have value in improving your city. The peer evaluation of the final project is due by April 22nd 21:00 UTC. It is very important you provide constructive feedback so that students can improve on their project. Please be polite, detailed, and fair in your evaluation of others work. You should expect to take approximately 20-30 minutes to complete each peer assessment.

Your grade on the final project will be based on the average of your instructor’s grade and the evaluation provided by your peers.

**Extra Credit: How To Video**

This assignment will focus on sharing skills you have. Select a FREE tool that you think would be helpful to students in this course. Record a step by step how to video showing students exactly...
how to use the tool. This can be any kind of tool you might think of that would be helpful to people interested in improving their city. For example, this previous student created a how to video on how to use Open Street Map http://technicity.osu.edu/ideas/62217/how-to-use-and-contribute-to-openstreetmap

More details about this assignment can be found in the assignments section found on the navigation toolbar. This project will take a variable amount of time depending on the tool the student develops and their knowledge of video creation. To receive credit for this assignment you will need to submit your video. This assignment may be submitted at any time, but is due by April 15th at 21:00 UTC. You must submit this assignment using the link on http://technicity.osu.edu (not directly from YouTube).

CLASS SCHEDULE

**Week One - Foundations of the TechniCity**
Understand the foundations of the TechniCity and what it means to be a city planner.

**Week Two - Infrastructure for the TechniCity**
You'll learn how sensors and networks are transforming our cities.

**Week Three - Engaging the TechniCity**
Through social networking and crowdsourcing platforms you'll learn how to engage in city building.

**Week Four - Entrepreneurial Urbanism**
You'll explore how open data initiatives, hack-a-thons, and urban prototyping festivals are creatively innovating our cities.

**Weeks Five & Six - Analyzing the TechniCity**
From sentiment analysis to mashups, you'll experiment with analyzing data.

**Week Seven – Leading TechniCities**
Explore how cities across the globe are using Technology to advance their future.

**Week Eight- The Future of the TechniCity**
You'll engage in peer evaluation of your fellow classmates projects and participate in lively discussion around the future of the TechniCity.

FREQUENTLY ASKED QUESTIONS

**Which materials are required for course completion?**

To help you make your way through this course, we have created and collected many resources that will be freely available to you during the duration of this course. In order to pass the course you must complete the all of the assignments and projects. The videos and MindMixer allow you
to learn the material and engage in discussion with others to deepen your understanding. The Blog allows the opportunity to reflect on what you are learning.

**Why do I keep seeing the abbreviation UTC, and what does it mean?**

Since our course participants access this site from all around the world, we have chosen to list assignment due times in Coordinated Universal Time (UTC). To calculate the difference between UTC and your local time zone, [try this web site](#). All assignments are due by 4 pm Eastern time.

**Why are the course videos produced at various screen resolutions and different backgrounds?**

TechniCity is designed to bring a wide variety of perspectives on technology in the city. It was not possible to bring every speaker into a single location for recording. The speakers have generously donated their time with each experimenting with different lecture capture techniques. Some result in spectacular results and others meet a minimum quality threshold using free and low cost capture methods. We hope that you will find all of these to be accessible and promote learning.