

FY1100 A07 Great Problems Seminar:

Livable Cities

Worcester Polytechnic Institute

Worcester, Massachusetts

A-term – Fall 2018

Class Location: Foisie 105

Class Meetings: Tuesday and Friday 1:00 - 2:50 pm

1. Instructor Information

Professor: Dr. Geoff Pfeifer

Office: Salisbury Labs 327B

Email: gpfeifer@wpi.edu

Professors' Office Hours: Joint Hours: 11 - 12 pm Monday (005 Goddard Hall) OR by appointment

Professor: Dr. Marja Bakermans

Office: Goddard Hall 005

Email: mbakermans@wpi.edu

PLAs: Chris Tillotson (cmtillotson@wpi.edu), Alyssa Konsko (ajkonsko@wpi.edu), Kelley Townley (ktownley@wpi.edu), Matthew St. Louis (mastlouis@wpi.edu)

PLAs' Office Hours: 6:30 - 7:30 PM Thursday (Foisie Tech Suite 122)

2. Information about Course Support Staff

This class requires students to find information sources for a research paper or project.

Appropriate sources include scholarly and peer-reviewed journal articles, scholarly books, and well-respected news magazines and newspapers. Encyclopedia articles are acceptable only for background information, and are not to be cited in your paper. Jessica O'Toole are our Research and Instruction Librarian.

Research and Instruction Librarian:

Jessica O'Toole

Research & Instruction Librarian

Gordon Library 202A

jrotoole@wpi.edu; 508.831.4960

3. Course Goals and Learning Objectives

This Great Problems Seminar addresses the possibilities and liabilities of human life in the urban environment. As an increasing proportion of the world's population becomes urban, the possibilities for human achievement and the particular difficulties encountered in city life become more pressing. Through lectures, readings, discussion, and group projects this course will examine the ways in which the interaction of urban ecology, globalization and labor markets, social and environmental justice, city design and planning, and gentrification come together to create contemporary urban life. Urban sprawl can pose many threats to the environment, and we will examine ecological conditions (e.g., land use, pollution, heat island), patterns (e.g., changes in diversity), and processes (e.g., invasion of non-native species) associated with urbanization and how these influence and are influenced by social conditions in



cities. Additionally, students will develop an area of expertise in one problem of urban living and research, present, and propose sustainable solutions.

In this class, students will work to accomplish the following:

1. Identify urban ecological and humanistic issues of local, regional, and global importance
2. Describe opportunities and risks associated with urban environments
3. Critically analyze, interpret, and evaluate the complexities of ecological issues.
4. Know the key stakeholders in urban issues including scientists, political leaders, business leaders, government officials, philanthropists, and citizens.

Learning Objectives (Student Learning Outcomes)

Through our work together, we will meet the following learning objectives of the Great Problems Seminar. Students will

1. Collaborate effectively on a team and work individually,
2. Find sources, assess their relevance, and evaluate their claims,
3. Produce clear, effective, evidence-based writing,
4. Prepare and deliver engaging and effective presentations,
5. When confronted with complex, open-ended problems, be able to identify answerable questions, and select and evaluate suitable solutions,
6. Use awareness of the differences in experiences of the “great problem” by peoples from different cultures/regions/economic status in guiding the problem solving process,
7. Describe your values and those of others as they relate to addressing the great problem.

4. Required Course Materials

1. Wolfe, J. 2010. Team Writing: A guide to working in groups. MacMillan Learning. Bedford, St. Martin.

Supplemental readings will be available through the WPI library or posted on the course page in Canvas in the Files Folder. Video links can be found in Canvas in the Modules Folder.[For example, the following texts can be found on WPI’s library site: *Nature All Around Us: A Guide to Urban Ecology* by Beisner et al. (2013) and *Urban Ecosystems* by Adler and Tanner (2013), *Urban Ecology* by Gaston (2012)]

5. Tentative Course Schedule

Prior to first class: Readings: CH 1 in *Urban Ecology* by Gaston [Canvas] and “Megacities, not Nations are the World’s Dominant, Enduring Social Structures” <https://qz.com/666153/megacities-not-nations-are-the-worlds-most-dominant-enduring-social-structures-adapted-from-connectography/>

Session 1(8/24) Introduction

Readings: CH 1 in *Urban Ecology* by Gaston [Canvas]

“Megacities, not Nations are the World’s Dominant, Enduring Social

Structures” <https://qz.com/666153/megacities-not-nations-are-the-worlds-most-dominant-enduring-social-structures-adapted-from-connectography/>

Video: CHs 1 & 2 Urbanized [Canvas]

Assignment 1: Assignment 1 Part 1: Asset Map (due 8/28) Assignment 1 Part 2: Critical Reflection Essay (Due 8/31)

Session 2(8/28)The urban environment / ATC Visit

Readings: "What is ecology?" pgs 1-2and CH 2 & 18 in *Nature All Around Us* [Library]

Opdyke et al. 2011 [Canvas]

"Urban ecosystems and the science of ecology" (pages 1 - 16 in CH 1 in *Urban Ecosystems* by Adler and Tanner, Library);

Video: CH 3 Urbanized [Canvas]

Assignment 1 Part 1 Due

Assignments 2 and 3: Resilient Cities assignments (Due 9/4)

Session 3(8/31) Globalization, (Global) Cities, and the Decline of Nations / Library Visit

Readings: Robertson and White- "What is Globalization?" (Canvas)

Saskia Sassen- "The Global City" (Canvas)

Video: CH 1 Urbanized (Canvas)

Assignment 1 part 2 due(Critical Reflection Essay)

Session 4(9/4) Resilient City Team Presentations

Assignments 2 and 3 due(Resilient Cities assignments)

Video: CH 4 Urbanized [Canvas]

Assignment 4:Urban Ecosystem Services assignment (due 9/11)

Session 5(9/7) ATC Visit / Urban environment cont.

Readings: "Urban environment and ecosystem functions" CH 3 in *Urban Ecology* [Library]

McPhearson et al. 2015 [Canvas]

Video: Chronicle Boston videos [Canvas]

Assignment 5:Video interview assignment (Due 9/18)

Session 6(9/11) Cities in the US: Race, Class, Environment and the History of the Present.

Assignment 4 due (Urban ecosystem services)

Readings: find the "Media Links for 9/12" page under the readings folder (under the files tab) and watch, listen to, and read through all of the links. Also, short Pages from Lees, Slater, and Wily "Gentrification" (canvas)

Assignment 6: Reflective Essay (due 9/21)

Session 7(9/14) Species diversity and urbanization

Readings: CH 3, 4, and 20 in *Nature All Around Us*[Library]

Pages 139-155 in "The ecology of urban organisms" (CH 4 in *Urban Ecosystems*, Library)

Assignment 7: Crosstown Biodiversity (due 9/25)

Session 8(9/18) Meet in the City

Assignment 5 due(Interview video)

Readings:Canvas



Session 9(9/21) Project ideas brainstorming / ATC visit

Assignment 6 due (Reflective Essay)

Readings: None

Video: CH 5 Urbanized [On Canvas]

Assignment 8: Project Pitch (due 10/02)

Session 10(9/25): Crosstown Biodiversity Presentations

Assignment 7 due(Urban Biodiversity Assignment)

Readings: CH 21 and 23 in *Nature All Around Us*[Library]

Assignment: Proposal (Due 10/9)

Session 11(9/28) Martin Burt / Community Partners / Team formation

Peer evaluations of Interview Videos Due

Readings: CH 5 in *Urban Ecosystems* by Adler and Tanner [Library]

Video: CHs 4 & 6 in Urbanized [Canvas]

Session 12(10/2) Project Pitch day/lightning presentations (Pitch two project ideas to class and receive class feedback)

Assignment 8 due (Project Pitch)

Session 13(10/5) Data collection methods / Work day / Library

Readings:Pages 110-120 in *Research Design* by J. Creswell [Canvas]

Session 14(10/9) Project Proposal due and Presentations

IMPORTANT NOTE: The above schedule, policies, procedures, and assignments in this course are subject to change. Professors Pfeifer and Bakermans reserve the right to make changes to the Course Syllabus throughout the term.

6. Teaching Methodology

This course is hands-on and application oriented. By its design, you will have the opportunity to explore, clarify and strengthen your problem solving skills and group interpersonal dynamics. Please be aware that it is expected that you will experience a certain level of ambiguity and perhaps even a feeling of being overwhelmed at times in this Great Problem Seminar. We will explore things that will be unclear and uncharted. This course will be presented through a combination of chapter materials, structured group discussions and activities, self-reflection assignments, and group presentations/projects.

Please be aware that it is strongly expected that each student will invest a minimum average of 12 hours per week engaged in outside work for this GPS course. This is consistent with the standard of working three (3) hours outside of class for every one (1) hour of classroom time. You will need to work in groups so you must make yourself available to your group members outside of the scheduled classroom time. To be successful in this GPS course, you must use effective time management and project planning tools.



One component of this course involves thinking through issues of multiculturalism within group dynamics and in the great problems that we are working to solve. Quotes from your assignments may be used anonymously to analyze student engagement around issues of multiculturalism.

Note on classroom culture and expectations: We expect that all participants in our classroom (students, faculty, and staff) will be respectful of each other. Racism, sexism, discrimination based on sexual identity, or other forms of oppressive behavior are neither expected nor tolerated in our classroom. If you experience any of these types of discrimination please bring it to the attention of the instructors.

7. Grading Policy/Summary

- Assignments (8)- 50%
- Written Project Proposal- 15%
- Project proposal presentation- 15%
- Attendance and Participation- 10%
- Discussion Board- 10%

Assignments: These assignments will occur throughout the term. Although we may spend some time working or presenting results of the assignments in class, much of the work needed to complete each assignment will be expected outside of class. Assignments are typically an extension of class discussion or reading material that was covered recently.

Project Proposal: This will be due at the end of A term and will consist of a statement of the problem your project group will seek to address, background research of the problem, and initial thoughts on few possible ways you might seek to address the problem as well as avenues for future research (the proposal is typically 10 pages in length). More info will be given about this once you begin working on it.

Project Proposal presentation: This will consist of a formal group presentation wherein your group will introduce your proposed project to the class. More information will be given about this as we get closer to the due date.

Attendance and Participation: Your individual participation consists of your effort in the classroom and your effort in your group work outside of the classroom. We expect that you will be prepared for every class. At the beginning of each class session, we may start by asking someone to summarize parts of the readings or group assignments. With a reading, you should be able to outline the key points and offer your view.

Discussion Board: You must write **4 original posts** and **comment on 5 other posts** (written by others) throughout the term. Your **original posts** should give a brief (2-3 sentence) summary, explain why it is important/ how it connects to the material for the course, and give your opinion of it. For original posts, you may have no more than one per week throughout the term. Your **comments on 5 other posts** must be distributed weekly as well throughout the term.

What do you post about? You have to cover the following 2 options: 1) an article (journal, news report, etc.) that you have found that relates to cities, 2) your experience at a city-related event. For option 2, one of these posts **must** be about attending a public agency meeting in Worcester (or any other city). Worcester public meetings can be found at: <http://www.worcesterma.gov/city-clerk/public-agency-meetings>. We will keep a running list of additional city-related events running this term to help you find them (and feel free to add to the list if you know another). In any original post that details your experience at an event, you need to include a selfie at the event so we can see that you attended.

Notes about Group work: With ANY group work, EACH individual is responsible for the content that is handed in, and each person should approve and have a copy of the final product that is to be turned in for grading. In other words, if 1 person plagiarizes or turns in poor quality work for a section, the ENTIRE group gets the same grade (or further academic dishonesty penalties).

Grading for Missed Work

We want you to treat this class as an important priority in your studies. For that reason, we will hold you accountable to meet deadlines. Late assignments will lose 10% of their point value per day (24 hours) late. If you have a conflict with meeting a deadline (e.g., experience a case of extreme emergency), please contact Professors Pfeifer and Bakermans before you miss the deadline and we will work with your situation on a one-on-one basis. It is expected that you will meet the deadlines and manage your schedule to do so.

8. Course Policies / Student Responsibilities

Course Adaptations or Accommodations Because of Disability

If you need course adaptations or accommodations because of a disability, or if you have medical information to share with us, please make an appointment as soon as possible. If you have not already done so, students with disabilities who believe that they may need accommodations in this course are encouraged to contact the Office of Disability (ODS) as soon as possible to ensure that such accommodations are implemented in a timely fashion. The ODS is located in Daniels Hall. Their phone number is 508.831.4908.

Student Responsibilities

In this course, each student is expected to:

1. Attend each class session in its entirety, participate in a positive and professional manner that is reasonable of a college student and contribute to all class activities in a purposeful manner that ensures that the course objectives are reached, if not exceeded. If a student misses more than four (4) hours of scheduled classroom time, she/he will be asked to withdraw from the course if possible or earn no credit (NR) for the course. Repeated tardiness (that is, late arrival for more than three class sessions) will result in the lowering of the course grade by one letter grade.
2. Come to class prepared. Specifically, you are to (a) read the assigned readings listed in the section marked 'reading' on the course schedule before coming to class and (b) be prepared to work and contribute in a purposeful manner during each class session.

3. Meet all deadlines as described on this Course Syllabus document or any written addendums to this course outline. There are no make-ups or extra credit assignments. With the exception of extreme emergency conditions, no grade of "Incomplete" will be given.
4. The use of cell phones and similar electronic devices are not allowed during class and should be turned off and put away before entering the classroom. You are welcome to use a computer to take notes, but not for anything else. Students violating these policies will be asked to leave.
5. Do her or his best in this course. You will be responsible for your own work product in this course and your professional reputation stands on its own.
6. Ask for help whenever you have questions.

Academic Honesty Policy

The Student Guide to Academic Integrity, provides information associated with Academic Honesty Inquiries. Students are expected to be familiar with the Policy, and understand what constitutes violations of the Policy. If unsure, students have an obligation to ask their Professors questions pertaining to the issue.

Violations of the WPI Academic Honesty Policy constitute academic misrepresentation for which no academic credit can be given and for which appropriate sanctions are warranted. The university affirms that acts of cheating, plagiarism, facilitation and fabrication by students demean the institution, debase the academic degree awarded, have no place in the university, are serious offenses to academic goals and objectives, and to the rights of fellow students.

"Cheating" means to intentionally misrepresent the source, nature, or other conditions of academic work so as to accrue undeserved credit. Cheating includes, but is not limited to:

- Having another person take one's place for any academic performance without the specific permission of the instructor;
- Using a substantial portion of a piece of work previously submitted for another course or program to meet the requirements of the present course or program without notifying the instructor to whom the work is presented.

"Plagiarism" means to take and present as one's own a portion of the ideas or words of another or to present as one's own an idea or work derived from an existing source without full and proper credit to the source of the ideas, words, or works. As defined, plagiarism includes, but is not limited to:

- The copying of words, sentences and paragraphs directly from the work of another without proper credit;
- The copying of illustrations, figures, photographs, drawings, models, or other visual and nonverbal materials, including recordings of another without proper credit; and
- The presentation of work prepared by another in final or draft form as one's own without citing the source.

"Fabrication" means the falsifying or fabrication of data, records, or any information relevant to the student's participation in any course, academic exercise or academic record. As defined, fabrication includes, but is not limited to:

- Altering grades or other official records
- Inventing or changing data
- Falsifying research and/or data

- Invention of sources
- Sabotaging another student's work or academic record.
- Presenting falsified information in order to postpone or avoid examinations, tests, quizzes, or other academic work.

Project Term Schedule

Session 1 (T 10-23) Teamwork/group problem solving

Readings: CH 3 in *Team Writing* book

Assignment 1: Revised proposal and presentation (Due 11/2)

Research Log/Discussion Board Entry #1 (due 10/26 Comments Due 10/30)

Session 2 (F 10-26) Work day / Library in-class work

Research Log/Discussion Board entry #1 due

Readings: CH 1 in *Team Writing* book

ALL on Canvas: Understanding Teams (Chap 1); Team Beginnings (Chap 3)

Assignments 2 & 3: Contact assignments, part 1 and 2 (Due 10/30 and 11/9)

Session 3 (T 10-30)

Readings: CH 2& 8 in *Team Writing* and CH 11 (Problem Solving) on Canvas

Assignment 2 due: Contact assignment, part 1

Session 4 (F 11-2) Project Revision Presentation

Assignment 1 due: Revised proposal and presentation

Research Log/Discussion entry #2 due (comments by 11/6)

Session 5 (T 11-6) Teamwork Equity and Inclusion: Team Processing sheet

Readings: Canvas

Assignment 4: Team Equity Reflection (Due 11/16)

Session 6 (F 11-9) Project Seminars (Teams: Repurposed Buildings(6) and Preserving History (5))

Readings: On Canvas

Assignment 3 due: Contact assignment, part 2

Research Log/Entry entry #3 due (comments by 11/13)

Session 7 (T 11-13) Project Seminars (Teams: Water Crisis (7) and Community Graden (8))

Readings: On Canvas

Session 8 (F 11-16) Project Seminars (Teams: Woosox (4) and Education (3))

Readings: On Canvas

Research Log/Discussion entry #4 due (comments by 11/20)

Assignment 4 Due: Team Equity Reflection



Session 9 (T 11-20) Project Seminars (Team New City (2) and LEED energy efficiency (1))

Readings: on Canvas

Research Log/Discussion entry #5 due (comments by 11/27)

Assignment 5: Poster draft (Due 11/30)

Assignment 6: Final poster (Due 12/4)

Assignment 7: Final Report (Due 12/14)

F 11-23 - NO CLASS

Session 10 (T 11-27) ATC presentation about posters/ work day

Readings: on Canvas

Session 11 (F 11-30) Present Draft Poster

Research Log/Discussion entry #6 due (comments by 12/4)

Assignment 5 due: Present poster draft

Session 12 (T 12-4) Work day

Assignment: Statement of Learning (Due 12/14)

Session 13 (F 12-7) Poster Practice Session

(S 12-08) Submit final poster to ATC. Drop-off window= Saturday, 12/8 between 2pm-4pm, posters will also be accepted on Friday by 5pm

Tuesday 12-11 Poster Session 10 am- 12 pm (there are no classes on this day)

Session 14 (F 12-14) Discussion and feedback session

Final Report Due before class

Statement of Learning due

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7. Grading Policy/Summary

Revised project proposal and presentation- 15%

Contact assignments - 10%

Teamwork Diversity and Inclusion reflection - 5%

Project Seminar - 15%

Poster Draft - 5%

Final Poster and Presentation - 10%

Final report - 15%

Seminar reading response cards - 5%

Attendance and Participation- 10%

Research Log/Discussion Board- 10%

Revised proposal: You received comments on your proposal that you turned in at the end of A term. Based on the comments and further work you have researched, you will need to revise, refine, and edit this and submit it.

Research Log/Discussion Board: You will have ongoing submissions (7 total) throughout the term where we ask you to document your research, reflect on research activities, and team dynamics and make connections across your team.

Poster and poster presentation: The group project will culminate, in part, in a poster that you will then present to your instructors, peers, and the wider WPI community.

Written report: The written report will be the other component of the final project.

Attendance and Participation: Your individual participation consists of your effort in the classroom and your effort in your group work outside of the classroom. We expect that you will be prepared for every class. At the beginning of each class session, we may start by asking someone to summarize parts of the readings or group assignments. With a reading, you should be able to outline the key points and offer your view.