USC Sol Price School of Public Policy

“Using Big Data to Promote Climate Resilient Infrastructure and Smarter Cities in Rio de Janeiro, Brazil”

USC Price Brazil Lab PPD 613a and 613b
Spring and Summer 2017

Instructor
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Office Hours: TBD
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Spring meeting dates:
TBD

Dates in Milan:
TBD

USC Price International Labs
The Price School International Labs integrate scholarly knowledge with professional practice by providing consulting services in a setting outside the United States. Lab participants work collaboratively in multidisciplinary teams to address a particular project identified by the client in the host country. With active guidance from their professor, students analyze information pertinent to the project and its context, and then produce a set of policy recommendations for the client. These recommendations are supported by classroom knowledge, academic research, analytical tools, databases, case studies, together with various maps and graphics.

As participants transition from the classroom to a real-world international setting, they gain direct experience with translating professional practice in a cross-cultural context. While some background research and preparation is necessary prior to leaving the U.S., the bulk of the assignment is undertaken on an intensive basis in the field. The on-site work culminates in a presentation to the client. The International Labs are designed as integrative professional experiences for graduate student from across the Price School. Graduate students from other USC programs may also join on a case by case basis (with permission from the instructor). The labs provide students with an opportunity to build their credentials and experience while extending their network of professional contacts.

The International Lab comprises two components. PPD 613a is a 1-unit course in the spring semester that precedes and is the prerequisite for a companion two-week, 3-unit intensive field course offered in the summer term. Although the two are closely coupled, they are technically two distinct courses.

USC Price Brazil Laboratory 2017
The first component of the Brazil Lab, PPD 613a, will be conducted over four sessions at USC during the Spring 2017 semester – January 18, February 14, March 8 and April 12. The second component, PPD 613b, will be conducted on location in Rio de Janeiro from May 22 to Friday, June 2, 2017. A detailed daily schedule for this intensive component will be announced prior to arrival in Rio de Janeiro.
The 2017 Brazil Lab is focusing on the question of how city management might use big data to promote climate resilient infrastructure and smarter cities. As climate change is increasingly showing its impact, cities have become vulnerable mainly to two types of phenomena: heat waves and massive rainfalls. In response, cities around the world have invested in climate adaptation technologies to avoid or mitigate the negative externalities, but also in open data centers to inform decisions that need to be made in light of new challenges posed by climate change. In this year’s Brazil Lab students will work towards developing practical recommendations on how big data and pervasive technologies can be employed to enhance local government decision making on climate resilience, with special regard to infrastructure, housing and health policies.

The Brazil lab values a client-driven, but also a student-driven project approach. As such, students will be given ample opportunity to shape the scope and direction of the learning experience, while actively engaging with inputs provided by the local partners. Over the course of the preparatory course in the spring semester, lab participants will take the UN climate challenges initiative as a starting point to develop solid background knowledge on the issue. Upon arrival in Rio de Janeiro, the emphasis will be on close collaboration both with the local client, the Prefeitura of Rio de Janeiro, as well as with the local institutional partner, Fundação Getulio Vargas (FGV) Rio. Key elements comprise a visit to the Climate Policy Institute where students will learn about the various disruptive extreme weather events that Rio has experienced in the past few years and get a better understanding of the local governance context. Additionally, students will be able to visit the Center of Operations (Big data center) at the Mayors office.

During the 1-unit preparatory course in the spring semester, students will conduct background research, form thematic teams, identify relevant case studies, and develop a proposed work plan that will guide the fieldwork in the summer. During the 3-unit intensive summer course, PPD 613b, students will spend two weeks in Rio de Janeiro and environs meeting with experts and practitioners, conducting site visits and working collaboratively on the project. This work culminates in the submission of a final written report and a single, integrated presentation of that report to the client on the final day of the Lab.

**Course Objectives**

As with all USC Price International Labs, the learning objective is to learn how to translate “classroom knowledge” into professional practice, and to do so in a setting outside the United States. The pedagogical model draws on a professional consulting paradigm, with a clearly identified client and terms of reference for the students’ work.

Specifically, the learning objectives for the two-part lab include the following:

- **Integration and application of classroom knowledge to a specified problem context.** Students will have the opportunity to develop their skills associated with synthesizing existing research, finding and gathering data relevant to the project, and using the data to diagnose problems, design and assess various options, and develop recommendations that take into account the constraints facing the client.

- **Management of an international consulting project, paying particular attention to formulating and adhering to a manageable work plan.** Students will gain valuable practice in presenting analyses of issues and recommendations in a concise, clear and interesting manner from the perspective of their client. Participation in the Lab also entails an affirmation of professional norms of conduct. Students are expected to adhere to professional norms of punctuality, thoroughness, reliability, communication skills, professional appearance, integrity and ability to work well in multi-cultural teams.
Personal growth in terms of teamwork, by developing a better understanding of how to function as part of a team with international members. Participation in the Lab provides students with useful insights into their individual strengths and what they can contribute to a team effort, as well as how to resolve interpersonal and organizational issues within the team. The course also intends to attract students with diverse backgrounds and interests, so that individual team members are able to contribute the specialized knowledge related to their field of study.

Translation of professional practice in a cross-cultural setting. Professional practice as developed in the United States is embedded in a particular social, institutional, economic and cultural context. A key objective of the course is for students to gain a better awareness of how to adapt their professional practice to suit contexts that are often quite different from those in the U.S..

Learn about public-private partnerships as an institutional form, including the different models, their purpose, how they operate, and the associated benefits and challenges of each for the public sector. Students will develop lessons learned from a wide range of case studies and assess the applicability of those lessons for the Italian context.

Assignments and Determination of Grades

**Spring semester (1-unit course)**
Final grades for the 1-unit course PPD 613a are based on the following items:

- **Assignment 1: Self-introductions.** Each student will record a 2-3 minute Voice Thread video. This video will be a self-introduction that explains how s/he expects to contribute to the team effort, based on her background training, knowledge and interests. (10%)

- **Assignment 2: Academic review.** Each student will read and report on a scholarly article pertaining to public-private partnerships from the readings listed in the Reference section under “Challenges and Experiences” or “Italian Context.” The 2-3 page report should summarize the article in question while explaining its potential relevance for practitioners. (30%)

- **Assignment 3: Case study.** Working in teams, students will research a case study in the U.S. or Europe where public-private partnerships were used to deliver local public services. Each team will present its findings in class with an emphasis on the lessons learned from that case study. (20%)

- **Assignment 4: “Translation”.** Each student will write a 2-3 page essay assessing how readily the prior case studies and academic reviews apply (or not) to the Italian context. What are some of the unique institutional, cultural or economic conditions in Italy that may need to be considered? (30%)

- **Class participation.** The relevant metric here is how each student’s participation enriched the experience of others in the class. (10%)

**Summer semester (3-unit course)**
While individual effort and initiative is essential, ultimately it is the quality of the group product that matters to the client. Accordingly, final grades for the 3-unit course (PPD 613b) are based on both group and individual components.

Although each student will be contributing in her own way to the outcome, the written report will be evaluated as a single, integrated document. All students succeed or fail in equal measure, based on the
quality of the group work. Similarly, the final presentation made to the client will be evaluated as a single, coherent effort. Accordingly, half of each student’s grade for this 3-unit course will be calculated as follows:

- **Final group written report.** This report will be addressed to the client, but should also be of interest to a wider audience. It should be a summative effort that states its purpose clearly while also explaining its findings and recommendations in a thorough, professional and persuasive manner. Arguments should be supported – as needed – with an appropriate range of data, graphs, illustrations, analytical work, appendixes and bibliographic references. The emphasis should be on clarity of thought, with a crisp writing style. Its length should be kept to a minimum, subject to fully accomplishing what it has set out to do. (15%)

- **Final group presentation to client.** The presentation made to the client should generally follow a parallel structure to the written report, but with appropriate adjustments to reflect the different medium of communication. Although each student should contribute to its content in some meaningful way, the presentation itself should not be cluttered with multiple voices. The emphasis should be on a single, integrated, coherent presentation on behalf of the entire group. (10%)

- **Interim group written report.** A full draft of the written report should be submitted to the instructor three days prior to the final. Because there is so little time for review, feedback and revision, this interim effort is of equal weight to the final. (15%)

- **Interim group presentation.** A practice run of the final presentation will be given two days prior to the final. (10%)

The remaining half of each student’s grade will be based more directly on individual effort, as indicated here:

- **Class participation.** This includes punctuality, professionalism, and regular participation in all aspects of the Lab. Ultimately, however, the value of each student’s contribution is based on how others in the class benefit from his/her involvement. (15%)

- **Professional journal.** This is intended to be the centerpiece of your individual effort, and it is weighted accordingly. At one level, it is a daily record of your activities in the Lab. More than that, it is a venue for you to reflect on the Lab experience as you are experiencing it. You should aim to produce a thoughtful set of daily observations and reflections of enduring value. (25%)

- **Photo contest.** Each student will submit three photos, one in each of the following categories:
  - Photo pertaining to the overall theme of this Lab (public-private partnerships)
  - Photo revealing what it is like to participate in this Lab
  - Photo that shines with creativity and artistry.

Although the instructor will assign grades based on her own judgment, the three contest winners – one in each category – will be chosen by their peers through a ballot. (10%)

**Course schedule – Spring semester (PPD 613a)**
Although the spring semester comprises only one unit of academic credit, it is of crucial importance to ensuring the group arrives in Italy well prepared for the intensive portion of the course. Once one has arrived on site, it will be too late to prepare. Accordingly, the spring semester has four successive sessions, culminating in a full state of readiness.

**Session 1:** Session content includes course introduction and overview (including the clients and projects, the on-line platform and logistics) and class introductions. The instructor will lecture on the nature, structure and performance of public-private partnerships. Assignment 1 (Self Introductions) described above is due, and all readings listed in the Reference section under “Concepts & Theories” must be read before this session.

**Session 2:** Session content includes the Italian context with an introductory lecture by Professor Vecchi. The required readings for this session are noted in the Reference section. Assignment 2 (academic reviews) is due several days prior to the session 2 class meeting. Students may select an article or report from the readings in the Reference section under “Experiences and Challenges” or “Italian Context”. An academic article not listed may be reviewed with instructor permission. In class, the instructor will lead a discussion and assessment of what we learn from these reviews.

**Session 3:** Team presentation of case studies (Assignment 3), prepared in advance using the online platform. Class discussion of lessons learned.

**Session 4:** Assignment 4 (“Translation”) is due several days prior to the session 4 class meeting. In class, the instructor will lead a discussion and assessment of how lessons learned from the case studies and the scholarly articles may or may not apply to the Italian context. The Professional Practice readings listed in the Reference section are required reading for this session.

**Course schedule – Summer semester (PPD 613b)**

The two weeks spent in Rio de Janeiro will be highly intensive, with three main phases after arrival: ingestion, digestion, and production. These three phases are successive yet somewhat overlapping. Students should arrive in Rio de Janeiro no later than DAY, day month, year, ready to begin work Monday morning. The first week is primarily one of ingestion, with a full schedule of lectures and site visits designed to illuminate the policy issues within the local context. There is a one-day hiatus in the midst of this first week to allow students to begin to digest the vast quantities of information they have received, and to reflect upon how their own report (due the next week) can be incorporate these new findings.

The intervening weekend between the two intensive weeks is less structured but should be used productively. It also provides students with a much-needed opportunity to rest & recuperate so that they can continue working intensively the next week, which moves fully into production mode. Both the final written report and client presentation are due on Friday morning. In order to allow for adequate review and feedback prior to this final day, a practice run of the client presentation is due on Tuesday, June 16. Likewise, a full draft of the written report is due on DAY, day month, year. Students will be working in fluid teams with client presentation and written report being produced in parallel.
Week 2 Digestion & Production (May 29 – June 2)

<table>
<thead>
<tr>
<th>Report outline</th>
<th>Practice run for client presentation</th>
<th>Complete 1st draft of report due</th>
<th>Report &amp; presentation revisions</th>
<th>Final report due &amp; final presentation</th>
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**Statement for Students with Disabilities**

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or to the TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.—5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

**Statement on Academic Integrity**

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one’s own academic work from misuse by others as well as to avoid using another’s work as one’s own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code. See Section 11.00 (under University Governance) for a description of violations of university standards and Appendix A for the recommended sanctions: [http://web-app.usc.edu/scampus/university-student-conduct-code/](http://web-app.usc.edu/scampus/university-student-conduct-code/)

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: [http://www.usc.edu/student-affairs/SJACS/](http://www.usc.edu/student-affairs/SJACS/)

**References**

*Concepts & Theories (required reading for Session 1)*


**Experiences and Challenges (suggested readings for Academic Reviews) (suggested readings for Session 2 and for Academic Reviews) (Instructor needs to identify readings and articles)**


**Foreign Country Context (suggested readings for Session 2 and for Academic Reviews) (Instructor needs to identify readings and articles)**


**Professional practice (required readings for Session 4)**


SUGGESTED READINGS:

Nice Intros:


General:

