PPOL 5310: Public Management for Technology Innovation

Fall 2024
Class Meeting Times: Wednesdays │6:30 pm – 9:20 pm │ Room 6591 (Lifts 31-32)
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Background and Description:

Science, technology and innovation are widely accepted to have changed the world we live in. As the pace of change accelerates, innovation and technology promise to bring even more radical changes to our everyday lives. Given the increasing centrality and ubiquity of science and innovation, it is necessary to learn of the analytical approaches for developing appropriate public policy and governance structures so as to harness the full potential of scientific and technological advances. Innovative policies, management, communication, collaboration in the strategic use of digital technology, are all required a public policy is to appropriately channelled the power of science technology and innovation to make significant improvements in the lives of people served.

While advancements in science and technology have been rapidly expanding the range of solutions governments' most pressing problems, science and technology innovations have also raised a set of emerging ethical, institutional and legal issues for government, non-profit and private entities. This course aims to help students familiarize themselves with opportunities and challenges brought about by advances in science and technology, and analytical approaches for developing appropriate public policy measures, and governance structures to harness the full potential of these advances. Major topics covered include: science and technology policy, regulation of the use and application of new technologies, smart cities, the application of big data, and the management and governance of new media.

Objectives:

This course:

- Introduces tools, concepts, and insights to a public sector manager/leader responsible for managing science, technology and innovation
- Examines leadership and a variety of tools and approaches to public sector management of science in technology and frameworks for the effect of use of those tools and approaches
- Analyzes and discusses illustrative case examples of the development and implementation of innovative ideas and approaches in the public sector for the management of science, technology, and innovation

Requirements:

This course is structured around two main components: lectures and discussion sections. Lectures will occupy the first half of each class meeting, followed by interactive discussion sessions. Attendance at ALL lectures and discussion sections is mandatory, as is completion of all assigned readings. **Please note that more than two unexcused absences will result in a reduction of one sub-grade from your overall course grade.**

Readings:

There is no single textbook for this class. Instead, students will read selected articles and chapters predominantly from two books (below) each week. All readings are available on the course's Canvas website. Readings should be completed during the week in which they are assigned. You are also encouraged to read local newspapers and follow current-day news stories on innovation and technology policy developments in Hong Kong.

Tidd, Joe, John R. Bessant. 2018. *Managing Innovation: Integrating Technological, Market and Organizational Change*, 6th Ed. John Wiley & Sons: Sussex, England.

Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK.

Grade Distribution:

Canvas online discussion	5%
In-class participation	10%
Group discussion	15%
Opinion Piece	20%
Policy Memos @10% (x 2)	20%
End-of-semester Assignment	30%

Canvas online discussion (**5%**): This requirement includes engaging regularly (that is, every week) and intelligently in the online discussion board on the course's Canvas website. Students who are scheduled to "lead" a reading in a particular week will be required to **post questions and/or comments about the reading on the discussion board** two days before the actual presentation itself—that is, no later than Sunday 12 noon, of that week. Other students will respond, individually, to these questions/comments or to other observations made by their fellow classmates. All responses should be posted on the discussion board before Tuesday of that week at 8:00 pm so that everyone can read them before the class meeting time on Wednesday. The aim of this online forum is to stimulate thinking and facilitate class participation in the discussion sections. Your responses need not be very long; one or two critical points, clearly conceived and elaborated, will suffice. Evaluation of your performance will depend on *both* the extent *and* the quality of your participation in the online discussion.

In-class participation (10%) includes active and productive participation in both lectures and discussion sections. Starting from week 2, the second half of each class will be dedicated to discussion. The class will be divided into 9 groups, and each group will be responsible for preparing a short recap of the lecture as well as 1-2 case studies to serve as the basis for discussion. To fulfill this requirement, students are expected not only to attend class regularly but also to contribute meaningful questions and comments to both the lecture and discussion portions of the class. Do not hesitate to speak up, as almost every question or comment a student raises can open up valuable learning opportunities for the entire class. The instructor will make a concerted effort to encourage lively and fruitful discussions, and both the instructor and/or TA will keep a record of each student's participation. Class participation grades will be assigned based on this record.

Group discussion (15%): For the discussion component, students will be divided into groups. **Each group will be responsible for leading one discussion session during the semester.** These sessions, lasting approximately one hour, should begin with a **brief keynote presentation** leaving enough time for discussion. This presentation should introduce **relevant case studies** that illustrate the main concepts and ideas of the class theme, complementing (not repeating) the lecture and reading material with practical examples, preferably from the **work experiences** of the presenting group.

Following the keynote or in between different keynote sections, the presenting group will **facilitate an engaging discussion** with the rest of the class. This can involve posing specific questions, organizing

small group discussions, or employing interactive methods such as quizzes, polls, or debates. The goal is to create a **productive and lively learning environment**. We strongly encourage you to draw **from your own professional experiences** and to select cases and examples that resonate with you personally. This approach allows you to share your unique insights while helping your peers and instructor learn more about you.

Group discussions are designed to provide a responsible platform for deeper exploration of course material, connecting it to your work experiences. We expect each group to approach this task with dedication, organizing the discussion in a way that benefits their peers and enhances everyone's understanding of the subject matter. The main evaluation criteria are:
- Keynote/discussion connection to the class material
- Keynote/discussion connection to your own work experience
- Keynote analytical depth
- Moderation of discussion
- Engaging discussion

While not all group members are required to present, if there are 6 team members in a group, we will expect at least 4 members to be actively engaged in the presentation. The first student-led discussion will be held in the second class (week 2), on 11 September.

"Opinion piece" **(20%):** Each student will be required to submit a 1,500-word opinion piece. Aside from the length, the requirements for this piece are that: (a) it must be related to an issue/idea/event related to innovation and technology public (not corporate/business) policy in Hong Kong OR Mainland China, (b) it must be timely (i.e. it must be connected to something that has occurred or been in the news during the semester of our study (or at most in the second half of this year), and (c) it must reflect your **opinion** (that is, it must not be a regurgitation of a piece of news or event, nor should it reflect the opinion of others). **Due date**: No later than Wednesday 6 November (Week 10) *or earlier* (you may submit this assignment any time during the semester, but in any event no later than Week 11).

You can submit the "Opinion" piece in a video format, the duration should be equivalent to 1,200 words.

Policy Memos **(20%):** Over the course of the semester, every student will have the option to complete THREE (3) Policy Memos on topics of their choosing (but related to topics we have covered in a particular week). The highest TWO (2) scoring Memos will be counted for this portion of the grade. Each student MUST complete a MINIMUM of TWO (2) Memos. Each Memo will be required to be between 750 and 850 words long. Each Memo assignment will be presented to you with a case background and the questions you will be asked to address in your Memo. Cases will be shared during the semester on the course Canvas site at the appropriate times. A Policy Memo serves as a concise analysis of the issue with brief recommendations of what policy actions should (or should not) be taken for the desired outcome. Basic Memo structure consists of the following sections:

- Background/problem definition
- Issue analysis
- Policy options (with pros and cons)
- Strategic recommendations
- Additional work
- Limitations

1. Header (to, from, date, subject)
2. Executive summary (~100 words)
3. Background and Issue analysis (~150 words)
4. Policy options (with pros and cons) (~200 words)
5. Strategic recommendations (~150 words)
6. Limitations and barriers (~100 words)
7. Conclusion (~100 words)

It is valuable to see that you accompany your analysis and recommendations with relevant evidence, such as data, links, and references. The language of the memo should be professional but approachable as it targets practitioners, not academics. Therefore, if you use specific public policy terms, concepts, or frameworks, you have to make sure that your audience does not have to look them up or read additional materials in order to understand what your Memo is trying to convey. You will be provided with additional, more detailed tips on Policy Memo writing (with examples) during the semester. Your policy memo will be evaluated based on the quality of writing and analysis. Specifically, your memo will be graded in the following four aspects: 1. Clarity of writing; 2. Persuasiveness in argumentation; 3. Analytical rigor (use of evidence and comprehensiveness), and 4. Demonstration of understanding of relevant materials (concepts, theories, and tools) covered in the class.

***End-of-semester Assignment* (30%):** The end-of-semester assignment will be worth 30% of your course grade. For this assignment, you will create a comprehensive concept map that encapsulates the key ideas, theories, and themes covered throughout the course. Your concept map should include a minimum of 20 'concept nodes' representing main ideas or theories from the lectures. Each node should be accompanied by a brief description of 50-75 words. Additionally, 'links' connecting these nodes should be annotated with 20-30 words explaining the relationship between the concepts. You should also include at least 5 'examples' that provide real-world illustrations of the concepts, annotated with 40-50 words each. Overall, your concept map and accompanying annotations should total approximately 1,500-2,000 words. The objective is to synthesize the course material into a cohesive and interconnected framework. This assignment will test your understanding of the course content, your ability to identify relationships between different topics, and your skill in applying theoretical concepts to real-world scenarios. Detailed guidelines and assessment criteria will be provided to guide you through the process. You will be given the last class of the semester "off" (i.e. we will not meet) in order to complete the "end-of-semester assignment".

***Submission of Assignments and Seeking Help*:**

Generally speaking, *late submission* of assignments will NOT be accepted except for hospitalization or similarly serious external circumstances (evidence of which may be required). Students are strongly encouraged to submit papers early and, at the very least, promptly. Submitting a *first* draft early will aid considerably in submitting the assignment on time (and also improving its quality). Students who are experiencing trouble of any kind in writing their papers should seek help from me. Similarly, students anticipating difficulty in submitting the paper on time must discuss the situation WELL IN ADVANCE.

A personal invitation: I am here to help you. I want you to be interested in the class material and to do well and I will react positively to any enthusiasm you show. In that spirit, if there is anything related to the class you need assistance with, or about which you would like to raise questions or discuss or offer suggestions for, I strongly encourage you to do so in class, or to see me (virtually or in person). I have ample office hours (especially virtual). Additionally, I will always be available before and after class and I will endeavor to respond to all e-mails I receive as promptly as I can.

In general, I do not handle grade disputes by e-mail. Students who believe that their grades are not reflective of their performance or what they deserve should meet with me in person.

Schedule (you can find it in calendar form in Canvas) and Readings:

Week 1 Wed 4 Sep	**L1: Introduction and Course Overview Key Issues in Innovation Management** Fagerberg, Jan. 2005. Innovation: A Guide to the Literature. In *Oxford Handbook of Innovations*, edited by J. Fagerberg, D. Mowery and R. Nelson. Oxford: Oxford University Press. [Ch.1/pp. 1–26] Tidd, Joe, John R. Bessant. 2018. *Managing Innovation: Integrating Technological, Market and* *Organizational Change*, 6th Ed. John Wiley & Sons: Sussex, England. Ch.1
Week 2 Wed 11 Sep	**L2: Innovation as a Management Process** Tidd, Joe, John R. Bessant. 2018. *Managing Innovation: Integrating Technological, Market and* *Organizational Change*, 6th Ed. John Wiley & Sons: Sussex, England. Ch.2 **Student-led discussion (Group1)**
Week 3 Wed 18 Sep	**NO LECTURE (The day following Chinese Mid-autumn festival)**
Week 4 Wed 25 Sep	**L3: Learning From Markets** Tidd, Joe, John R. Bessant. 2018. *Managing Innovation: Integrating Technological, Market and Organizational Change*, 6th Ed. John Wiley & Sons: Sussex, England. Ch.7. **Student-led discussion (Group2)**
Week 5 Wed 2 Oct	**L4: Learning Through Alliances** Tidd, Joe, John R. Bessant. 2018. *Managing Innovation: Integrating Technological, Market and Organizational Change*, 6th Ed. John Wiley & Sons: Sussex, England. Ch.8. **Student-led discussion (Group3)**
Week 6 Wed 9 Oct	**L5: Changing Modes of Knowledge Production Inside the Public Scientific System** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.2. **Student-led discussion (Group4)**

Week 7 Wed 16 Oct	**L6: Rationales for Public Policy Intervention in the Innovation Process: Systems of Innovation Approach** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.5. **Student-led discussion (Group5)**
Week 8 Wed 23 Oct	**[PRE-RECORDED LECTURE – NO IN-PERSON MEETING]** **L7: Harnessing Science, Technology and Innovation for the Pursuit of Economic Growth** Lundvall, Bengt-Åke, and Borras, Susana. 2005. Science, Technology and Innovation Policy. In *Oxford Handbook of Innovations*, edited by J. Fagerberg, D. Mowery and R. Nelson. Oxford: Oxford University Press. [pp. 599–631] Chaminade Cristina, Lundvall Bengt-Åke and Haneef Shagufta 2018. *Advanced Introduction to National Innovation Systems*. Edward Elgar Publishing [Ch. 4 (pp. 41-53), Ch. 5 (pp. 54-67)]
Week 9 Wed 30 Oct	**L8: Functionality of Innovation Systems as a Rationale for and Guide to Managing Innovation Policy** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.6. **Student-led discussion (Group6)**
Week 10 Wed 6 Nov	**L9: Innovation and Small and Medium Size Enterprises (SMEs): Innovation Dynamics and Policy Strategies** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.8 **Student-led discussion (Group7)**
Week 11 Wed 13 Nov	**L10: Demand-Based Innovation Policy** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.12 **Student-led discussion (Group8)**
Week 12 Wed 20 Nov	**L11: Managing the Soft Side of Innovation: How do Practitioners, Researchers and Policymakers Deal with Service Innovation?** Smits, Ruud E., Stefan Kuhlmann and Philip Shapira. 2010. *The Theory and Practice of Innovation Policy: An International Research Handbook*. Edward Elgar Publishing: Cheltenham, UK. Ch.13. **Student-led discussion (Group9**