

▶ JSGS 859.3 – Innovation Policy

	University of Regina Campus	University of Saskatchewan Campus
Instructor:	Not currently offered at U of R	Peter W.B. Phillips
Phone:		966-4021
E-mail:		peter.phillips@usask.ca
Office Hours:		By appointment
Office Location:		146 Diefenbaker Building
Term:		Term 1 (fall)
Room:		Tbd
Date and Time:		Wednesdays, 1:00 - 3:50 p.m.

CALENDAR DESCRIPTION

This graduate course is designed as a field course in the theory and practice of innovation policy. The graduate students will investigate the theory, methodology and applications of innovation policy through primary readings, discourse and writing.

COURSE CONTENT AND APPROACH

Students will examine a variety of topics through readings, discourse and writing, including: the context of economic growth, technological change and innovation; theories and methods of innovation; policy applications; and critiques of innovation policy. Each class will start with a brief summary of the topics to be discussed, proceed to a discussion of the core and assigned readings, and will lead to a summary discussion.

REQUIRED READINGS

Textbook: Phillips, P. 2007. Governing transformative technological innovation: Who's in Charge? Edward Elgar.
Other required readings are included below.

EVALUATION

Sept:	WPA article, max 1500 words, essay statistical analysis of innovation policy data (Sept. 28)	15%
Oct:	Policy Brief, 5 minute presentation on a key policy issue (Oct 26)	15%
Nov:	Critical policy analysis, max 1500 words (November 23)	15%
Dec:	Evaluation of discussion (minimum 2 policy issue statements; 4 paper reviews)	20%
FINAL:	Critical comparative policy analysis paper, max 2500 words	
	Draft paper submitted to instructor and peers (Dec 12)	(late penalties forfeit to others in circle)
	Peer writing circle participation (Dec 12-15)	10%
	Final Paper (Dec 20)	25%

The three written assignments can be revised/resubmitted and I will regrade them.

LATE ASSIGNMENTS

Late assignments will be assigned a penalty of one grade (10%); special circumstances will be considered upon application by the student.

WRITING ASSISTANCE

Students are encouraged to visit the Writing Help Centre in Murray 142 (first floor of the Murray Library in the University Learning Centre). Free tutoring is available for students on a drop-in basis, or students can submit their papers online at:

<http://www.usask.ca/ulc/writing/online> Writing workshops on various topics are also available at no cost to students.

Students are also encouraged to seek out online resources -- the Online Writing Lab at Purdue University is an excellent starting point: <http://owl.english.purdue.edu/owl/>. Students who require assistance with software applications (Word, Excel etc.) are encouraged to visit IT4U in the University Learning Commons (across from the Writing Help Centre) for one on one help and free 50 minute software workshops.

STUDENTS WITH SPECIAL NEEDS

All students with disabilities are encouraged to register with DSS. Access to most services and programs provided by DSS is restricted to students who have registered with the office. Once you have registered, please contact the professor to discuss accommodations.

ACADEMIC INTEGRITY AND CONDUCT

Understanding and following the principles of academic integrity and conduct as laid out in the University of Saskatchewan's Guidelines for Academic Conduct is vital to your success in graduate school (as attached; and available at http://www.usask.ca/university_council/reports/archives/guide_conduct.shtml). Ensuring that your work is your own and reflects both your own ideas and those of others incorporated in your work is important: ensuring that you acknowledge the ideas, words, and phrases of others that you use is a vital part of the scholarly endeavour. If you have any questions at all about academic integrity in general or about specific issues, contact any faculty member and we can discuss your questions.

STRUCTURE OF THE COURSE

Students are expected to read all of the readings. Those 'assigned' readings will be expected to present the reading for 5-10 minutes and prepare and distribute a one-page summary of the key points. In addition, students will be assigned to weeks where they are expected to come with and present 1 or 2 issues related to innovation policy either related to the readings or to emerging policy issues. Some readings may change depending on issues that arise during the course.

Availability: P (Phillips has a copy); W (on web as indicated); L (in USask Library); L e-book (can be read online via USask Library); JSTOR (available via USask Library)

Week 1, Sept 14: Introduction to innovation policy in theory and practice

An introduction to the course and to the concepts of innovation policy in theory and practice. We will play the triple helix game.

<http://www.triplehelixconference.org/trilicious-the-triple-helix-innovation-game.html>

Core readings:

Phillips, chapters 1 and 5.

Week 2: Sept 21: Groundings

Introduction to concepts of innovation and the policy agenda

Core readings:

Charles Leadbeater on Innovation (http://www.ted.com/talks/lang/eng/charles_leadbeater_on_innovation.html) (W)

Identification of policy issues: 2 students

Assigned readings:

1. Romer, P. 2007. Economic Growth, " The Concise Encyclopedia of Economics, David R. Henderson, ed. Liberty Fund. stanford.edu/~promer/EconomicGrowth.pdf (W) and Romer, P. 1994. Beyond Classical and Keynesian Macroeconomic Policy. Policy Options, July/Aug. http://www.iisec.ucb.edu.bo/mercado/clases/macroeconomia_maestria/lecturas/Beyond_classical_and_keynesian_macroeconomic_policy.pdf
2. Romer, P. 1995. Beyond the Knowledge Worker. Worldlink, Jan/Feb. <http://www.versaggi.net/e-commerce/articles/romer-knowledgeworker.htm> (W)
3. Mokyr, Joel. The gifts of Athena. Chapters 1 & 7.
4. Smith, Adam. 1776. Wealth of Nations, Chapters 1 and 2. [tp://www.adamsmith.org/smith/won-b1-c1.htm](http://www.adamsmith.org/smith/won-b1-c1.htm) (W)

Week 3, Sept 28: Economic Growth, Technological Change and Innovation

Examination of the concepts of economic growth, technological change and innovation.

Core Readings:

Phillips ch 2-3.

Phillips, P. and C. Ryan. Forthcoming. Mapping the Innovation Elephant: Case studies in theory and practice. Chapters 1 and 2 (W). STIC. 2011. State of the Nation 2010 - Canada's Science, Technology and Innovation System. www.stic-csti.ca

Identification of policy issues: 2 students per week

Assigned readings: (8)

1. Alston, J. (2010), "The Benefits from Agricultural Research and Development, Innovation, and Productivity Growth", OECD Food, Agriculture and Fisheries Working Papers, No. 31, OECD Publishing. doi: 10.1787/5km91nfsnkwg-en. (W)
2. Fagerberg, J., D. Mowery and R. Nelson (eds), (2005), The Oxford handbook of innovation, Oxford: Oxford University Press. Chapter 1. (L e-book: [T173.8 .O89 2005eeb](#))
3. Helpman, E. (ed), (1998), General purpose technologies and economic growth, Cambridge, Mass.: MIT Press, Ch 1-4 (L: [HC79 .T4G464 1998](#)).
4. Mokyr, J. (2002a), 'Innovation in an historical perspective: tales of technology and evolution', in B. Steil, G. Victor and R. Nelson (eds), Technological innovation and economic performance, Princeton: Princeton University Press (L: [HC79 .T4T43 2002](#)) (P)

Weeks 4-5, Oct 5 and 12: Governance Systems and Actors

A 360° review of the concepts of governing and governance and a review of the actors and their motivations.

Core Reading:

Phillips Ch 4-8

Commission of the European Communities (EC), (2001), European governance: a white paper, COM(2001), 428 final, Brussels, 25 July (W)

North, D. 1993. Nobel Prize Lecture. http://nobelprize.org/nobel_prizes/economics/laureates/1993/north-lecture.html

Putnam, R. 2001. Bowling Alone: the collapse and revival of American Community. Simon and Schuster (chapter 1) (L/P).

Identification of policy issues: 2 students per week

Assigned readings:

1. OECD, Governance in the 21st Century, Paris: OECD, at: <http://www.oecd.org/dataoecd/15/0/17394484.pdf>. (W), Chapters 1--4.
2. OECD, Governance in the 21st Century, Paris: OECD, at: <http://www.oecd.org/dataoecd/15/0/17394484.pdf>. (W), Chapters 5-7.
3. Olson, M. (1965), The logic of collective action: public goods and the theory of groups, Cambridge, MA: Harvard University Press. (L: [HM131 .O.52 1965](#)) (P). chapters 1-2.
4. Ostrom, E. 2005. Understanding institutional diversity. Chapter 1 (P).
5. Picciotto, R. (1995), 'Putting institutional economics to work: from participation to governance', World Bank Discussion Paper 304, accessed on August 15, 2005 at http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/1995/09/01/000009265_3961219115337/Rendered/PDF/multi_page.pdf (W)
6. Putnam, R., R. Leonardi and R. Nanetti (1993), Making democracy work: civic traditions in modern Italy, Princeton: Princeton University Press, chapters 1, 4, 5.
7. Salamon, L. and O. Elliot (eds) (2002), The tools of government: a guide to new governance, Oxford: Oxford University Press, chapters 1 and 22 (L JF1525 .P6T66 2002)
8. Strange, S. (1988) States and Markets: An Introduction to International Political Economy. Pinter Press: London, esp ch. 1-2. (L: HF1411 .S788 1994)(P)

Week 6, October 17: Knowledge formation, invention, gestation and commercial exploitation

Examining the recombination of knowledge into inventions that flow through the gestational system to commercial exploitation.

Core Readings:

Phillips Ch 9-12

OECD, The Knowledge-based Economy (http://www.oecd.org/dsti/sti/s_t/inte/prod/kbe.htm).(W)

Identification of policy issues: 2 students per week

Assigned readings:

1. Bush, V. 1945. Science The Endless Frontier, A Report to the President by the Director of the Office of Scientific Research and Development, Chapters 1 and 6 (<http://www.nsf.gov/od/lpa/nsf50/vbush1945.htm>)
2. Gibbons, M., C., Limoges, H. Nowotny, S. Schwartzman, P. Scott and M. Trow (1994), The new production of knowledge: The dynamics of science and research in contemporary societies, London: Sage. (L: [QA76.76 .E95N49 1994](#))(P), Chapters 1 and 2.
3. Rosenberg, N. (1994), Exploring the black box: technology, economics and history, Cambridge University Press (L)(P), Chapter 1.
4. Jenswen, M, B. Johnson, E. Loreze and B-A Lundvall. Forms of knowledge and modes of innovation. *Research Policy* 36: 680-693. Jstor

Week 7, Oct 26: Economic theories and innovation policy

The neoclassical conception of the economy, standard growth theory and the new economic theories and their relevance for innovation policy.

Core readings:

Gilpin, R. 2001. Global political economy : understanding the international economic order. Princeton, N.J. : Princeton University Press, Chapters 4-6 (L: [HF1359 .G5616 2001](#)) (P).

World Bank. World Development Report, 1997 (Overview sections) (W)

Identification of policy issues: 2 students per week

Assigned readings:

1. Howitt, P and D. Weil. 2009. Economic Growth. The New Palgrave Dictionary of Economics, 2nd ed. http://www.dictionaryofeconomics.com/article?id=pde2008_G000209 (W) and Metcalfe, S. 2009. Technical change. . The New Palgrave Dictionary of Economics, 2nd ed. http://www.dictionaryofeconomics.com/article?id=pde2008_T000034&q=technical%20change&topicid=&result_number=2(W)
2. Lucas, R. (1988), 'On the mechanics of economic development', Journal of Monetary Economics, 22, 30-42. (JSTOR)
3. Romer, P. (1990), 'Endogenous technological change', Journal of Political Economy, 98(5:2), S71-S102. [http://www.jstor.org/sici?sici=0022-3808\(199010\)98%3A5%3CS71%3AETC%3E2.0.CO%3B2-8&cookieSet=1](http://www.jstor.org/sici?sici=0022-3808(199010)98%3A5%3CS71%3AETC%3E2.0.CO%3B2-8&cookieSet=1)
4. Scotchmer, S. (2004), Innovation and Incentives, MIT Press (L electronic).

Week 8, Nov 2: TBD (guest lecture or no class)

Week 9, Nov 9: Place, business and innovation policy

Examination of the business literature related to innovation policy, including clusters and business strategy.

Core readings:

Krugman, P. (1998), 'What's new about the new economic geography?', Oxford Review of Economic Policy, 14(2), 7-17. (JSTOR)

Identification of policy issues: 2 students per week

Assigned readings:

1. Fagerberg, J., D. Mowery and R. Nelson (eds), (2005), The Oxford handbook of innovation, Oxford: Oxford University Press, chapters 7 and 22.(e-book: [T173.8 .O89 2005eeb](#))
2. Held, J. 1996. "Clusters as an Economic Development Tool: Beyond the Pitfalls." *Economic Development Quarterly*. 10 (3-August): 249-261.
3. Porter, M. (1990) *The Competitive Advantage of Nations*. The Free Press: New York. Chapters 1-4. (L)(P)
4. Wolfe, D. and M. Lucas. 2005. Global Networks and Local Linkages: the paradox of cluster development in an open economy. McGill-Queen's University Press for the School of Policy Studies, Queen's University, chapters 1 and 3. (P)

Week 10, Nov 16: Processes, social theories and innovation policy

An examination of innovation models based on communities, partnerships and human-scale relationships.

Assigned readings:

1. Cooke, P. 2001. "Regional innovation systems, clusters, and the knowledge economy." *Industrial and Corporate Change*. 10 (4): 945-974.
2. Etzkowitz, H. and L. Leydesdorff (2000), 'The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University-Industry-Government Relations', *Research Policy*, 29(2), 109-123. (JSTOR)
3. Lundvall, B-A ed., *National systems of innovation : towards a theory of innovation and interactive learning*, chapter 1 (L).
4. Phillips, P. Regional systems of innovation as modern R&D entrepots: The case of Saskatoon. Chapter 2 in Chrisman et al, *Innovation and Entrepreneurship in Western Canada* (P)

Week 11, Nov 23: People, creativity and innovation policy

Examination of the business literature related to innovation policy, including clusters and business strategy.

Core reading:

Florida, R. 2007. Talent, Technology and Tolerance in Canadian Regional Development <http://martinprosperity.org/media/pdfs/3Ts-Canada-Florida-et-al.pdf> (w)

Identification of policy issues: 2 students

Assigned readings:

1. Audretsch, D and M. Feldman (1996), 'R&D spillovers and the geography of innovation and production', *American Economic Review*, 96, 631-640. (JSTOR)
2. Jacobs, J. 1969. *The Economy of Cities*. Random House: New York.
3. Scott, A. J. (1999) The US recorded music industry: on the relations between organization, location and creativity in the cultural economy. *Environment and Planning A*, 31, pp. 1965–1984. (JSTOR)
4. Zucker, L., M. Darby and M. Brewer (1998), 'Intellectual human capital and the birth of U.S. biotechnology enterprises', *American Journal of Economics*, 88(1), 290-306. (JSTOR)

Weeks 12, Nov 30: Theory into practice

How has theory been adapted into practice?

Core reading:

OECD. 2010. *The OECD Innovation Strategy: Getting A Head Start on Tomorrow*.

<http://www.oecd.org/dataoecd/24/11/25473397.pdf>; <http://www.oecd.org/dataoecd/14/32/42095821.pdf>

Castle, D. and PWB Phillips. 2011. Science and Technology in Canada: Innovation Gaps and Productivity Traps. In How Ottawa Spends, 2011-12: Life under the knife (again!), C. Stoney and GB Doern (eds), McGill-Queen's University Press, Montreal, 163-179.

Phillips, P. and D. Castle. 2010. Science and technology spending: still no viable federal innovation agenda. Chapter 9 in B. Doern and C. Stoney (eds), How Ottawa Spends 2010-11: Recession, Realignment and the New Deficit Era, McGill Queen's University Press, pp. 168-186.

Assigned readings: (others to be determined)

1. Japan: http://www.kantei.go.jp/foreign/innovation/interimbody_e.html;
http://www.kantei.go.jp/foreign/innovation/innovation_final.pdf
2. EU: http://ec.europa.eu/enterprise/policies/innovation/files/com%282009%29442final_en.pdf
3. US: <http://www.whitehouse.gov/administration/eop/nec/StrategyforAmericanInnovation/>
4. Canada: [http://www.ic.gc.ca/eic/site/ic1.nsf/vwapj/S&Tsummary.pdf/\\$file/S&Tsummary.pdf](http://www.ic.gc.ca/eic/site/ic1.nsf/vwapj/S&Tsummary.pdf/$file/S&Tsummary.pdf)
5. Australia: http://www.pc.gov.au/data/assets/pdf_file/0005/91382/productivity-growth.pdf

Week 13, Dec 7: Critiques and challenges for innovation policy

What is the role of the state in a global era? We will examine the concepts of complexity, the post-modernist critique and a number of responses

Core readings:

Phillips, chapter 13.

Assigned readings:

1. Fagerberg, J., D. Mowery and R. Nelson (eds), (2005), The Oxford handbook of innovation, Oxford: Oxford University Press, chapter 18.(e-book: T173.8 .O89 2005eeb)
2. Funtowicz, Silvio. 2002. "Post-Normal Science: Science and Governance under Conditions of Complexity" Institute for the Protection and Security of the Citizen 17: 63-74.
3. Karwandy, J. 2008. Perspectives on industrial clustering and the product, resource and knowledge based views of management, MSc Thesis (esp Ch 2 and conclusions) (W)
4. Porter, J. and P. Phillips (eds). 2007. Public Science in Liberal Democracy. University of Toronto Press, Chapters 13 and 16 (L)(P)

DETAILED INFORMATION ON ASSIGNMENTS AND EVALUATION

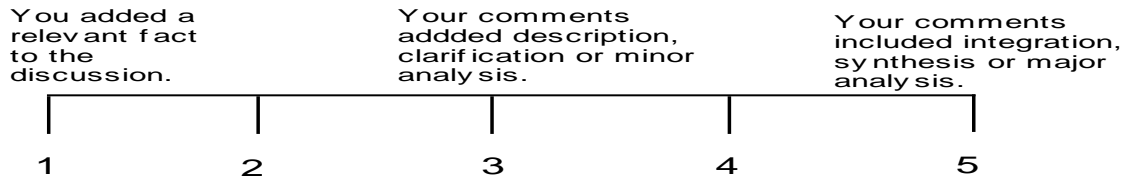
1. Sept 28: You will be provided with an array of statistics to choose from, will be given a basic orientation to EXCEL functions and then required to write a max. 1500 word essay that undertakes a statistical analysis of a specific set of innovation data. The paper should follow the Western Policy Analyst format, with informative graphs and tables. You MUST add value to all of the data you present, either in terms of recombination, trend analysis, comparative analysis or some other manipulation. A marking matrix will be posted on the website (value=15%).

2. October 26: you will be required to prepare a maximum 5 minute power point presentation on a policy brief on a topical issue that addresses some aspect of innovation policy. You should submit your ideas to the professor by October 10. The brief should use models, method and metrics to amplify and asses the importance of the issue and the issues and options related to it. A marking matrix will be posted on the website (value=15%).

3. November 23: Each student is expected to write an individual assignment on a topic approved by the instructor. This study should examine a practical challenge or opportunities related to innovation policy in Saskatchewan, Canada or around the world. This could involve, for instance, development of a theoretical framework, critical examination of a specific policy option, evaluation of existing policies or a comparative critical analysis of innovation policies. Individual assignments should be a maximum 1500 words, double-spaced and fully cited. Individual assignments are worth 15% of your final mark. Note, a summary of the course notes is NOT acceptable.

4. Grading course participation: Students are expected to read all of the readings. Every reading will be assigned to two reviewers. Those 'assigned' readings will be expected to present during the seminar a brief synopsis of the readings (5-10 minutes) and to prepare and distribute a maximum two-page summary to share with your classmates. The synopsis and the presentation will be evaluated. You will each do 4 in the course.

In addition, we will evaluate your general participation in the resulting discussion about papers you and others present. Every student is expected to come with and present questions or substantive comments on the readings each week. You also will be assigned two opportunities to come with a policy issue to present that is relevant to the topic of the day or simply topical in the policy debate. I will lay out expectations in the course. Each of you will participate in the marking of others. The following scale will be used to assess this, with 5 being the highest:



We will annotate the contributions in a table similar to the one below.

Contribution	Value	Point
Fact only	1	
Fact and description /clarification	2	
Minor analysis	3	
Some synthesis	4	
Integration, synthesis and major analysis	5	

5. Final exam: The format will be discussed further in the course. The exam will take the form of an essay that you will produce in draft form, distribute to a peer writing circle and then revise and submit the final. I will mark the draft, the writing circle comments and the final paper.