Course syllabus
POLC40H3

CURRENT TOPICS IN POLITICS:
Politics and Innovation

Summer 2019

Wednesdays, Fridays 1:00 – 3:00pm, BV 264
Office Hours: Wednesdays, Fridays 3:00 – 4:00, HL 502

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Course description: Governments and development organizations routinely champion the economic and social benefits of domestic innovation (OECD 1994). Virtually every country in the world now has an "innovation policy" of some sort. POLC40 explores the interface between politics and innovation to shed light on what makes some jurisdictions technological leaders and others technological followers. Major themes include political institutions, development, education and labour market policy, defense, finance, science and industrial policy.

Format: POLC40 consists of eleven two hour lectures. Students are encouraged to comment on the material and ask questions during lectures.

Readings: all readings are posted to the course Quercus page

Grading Scheme and Course Requirements:

Paper proposal (due 24 May)	15%
Midterm exam (5 June)	30%
Term paper (due 10 June)	25%
Final exam (20 June)	30%

Exams: The midterm will take place during class on 5 June. The final exam will take place on 20 June at 2pm in MW170. Both exams will consist of multiple choice and short answer questions based on the material covered in lecture. The final exam is cumulative but will emphasize material covered after the midterm.

Paper proposal: Students must submit a 1000-1200 word summary of a case study they wish to explore in their term papers. As there are many suitable topics for this assignment, students are required to discuss their topics with the instructor during office hours prior to submitting proposals. Instructor approval is worth one third (5%) of the assignment grade.

The purpose of the proposal assignment is to ensure an early start on the term paper. It is not necessary at this stage to include any theory or explanation, nor is it necessary to cite sources; both are requirements for the final paper, however. Proposals can be single or double-spaced and employ three-quarter or one inch margins. The assignment is due by 11:59pm on 24 May. Late assignments will be penalized five percentage points per day late, beginning at 12:00am.

Some options for case topics include: Canada's federal Industrial Research Assistance Program (IRAP); the Canadian federal Superclusters program; the Alberta Oil Sands Technology and Research Authority (AOSTRA); the American Defense Advanced Research Projects Agency (DARPA); North American automotive policy after the Autopact; the East Asian "developmental state" in transition; labour market policies in liberal and/or coordinated economies; innovation in newly industrialized countries; 5G and the "internet of things"; politics and autonomous vehicles; politics and genomics; Ireland/New Zealand's IT revolution; Italy's industrial districts (to name but a few)

Essay assignment: A major component of POLC40 is a case study assignment, the purpose of which is to apply theory and concepts learned in class to a case study of the student's choosing. Students are free to change their cases as they see fit prior to writing and submitting the final research paper. The final paper may incorporate a portion or the entirety of the proposal text and should be no shorter than 2,500 words including references, tables, figures, and notes. The assignment is due by 11:59pm on 10 June. Late assignments will be penalized five percentage points per day late, beginning at 12:00am. All assignments may be either single or double spaced, employ three quarter or one inch margins, and may use either Chicago style or APA in-text citations.

Assignment submission: Normally, students will be required to submit written work to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site. Submission to Turnitin is voluntary**.** Students who wish to submit written assignments by other means must make arrangements with the instructor at least one week prior to the assignment due date.

Extensions and absences: Extensions will be granted, and absences excused, only in the event of documented medical necessity. Late essays will be penalized five percentage points per day. No assignments will be accepted after 14 June, except under extraneous circumstances. If a student must submit an assignment after 14 June, a petition through the faculty administration may be required.

Grade appeals: Grades for major assignments may be appealed, first, to the course instructor and, subsequently, to the Undergraduate Director.

Accessibility needs: The University of Toronto is committed to accessibility. If you require assistance or have any accessibility concerns, please visit: https://www.utsc.utoronto.ca/~ability/

Academic misconduct: Make sure the information in your essays is in your own words. Plagiarism is a serious academic offence and will be handled according to the rules in the university's Code of Behaviour. For further information, see the University of Toronto's policy on academic integrity at: https://www.utsc.utoronto.ca/aacc/academic-integrity

CLASS SCHEDULE

PART I: the conceptual toolkit

8 May: introduction and course overview

10 May: what is innovation?

Topics covered: entrepreneurship, techno-economic paradigms, common frameworks, diffusion of innovations, process and product innovation, product cycles and long waves

Required reading:

Perez, Carlotta. (2010). Technological revolutions and techno-economic paradigms. *Cambridge Journal of Economics, 34*(1): 185-202.

Further reading:

Schumpeter, Joseph. (1939). How the economic system generates evolution. In *Business cycles* (vol I, pp. 72-129). New York: McGraw-Hill.

Thompson, William. (1990). Long waves, technological innovation, and relative decline. *International Organization, 44* (2): 201-33.

Hirooka, Masaaki. (2006). Kondratiev business cycles and innovation dynamism. In *Innovation dynamism and economic growth* (pp. 51-78). Cheltenham, UK: Edward Elgar.

Rogers, Everett. (2003). Elements of diffusion. In *Diffusion of innovations* (5th ed.) (pp. 1-38). New York: Free Press.

Kline, Stephen & Rosenberg, Nathan (1986). An overview of innovation. In R. Landau & N. Rosenberg (eds.) *The positive sum strategy* (pp. 275-306). Washington, DC: National Academy Press.

Schneider, Martin, Teske, Paul & Mintrom Michael. (1995). Bringing back the entrepreneur. In *Public entrepreneurs: agents for change in American government* (pp. 17-40). Princeton, NJ: Princeton University Press.

15 May: innovation in organizations part I —the multidivisional firm

Topics covered: firms, divisions of labour and specialization, supply chains and value chains, horizontal and vertical integration, markets and hierarchies

Required reading:

Galbraith, John Kenneth. (1972). The imperatives of technology. *The new industrial state* (2nd ed.) (pp.10-18). Boston, MA: Houghton-Mifflin.

Galbraith, John Kenneth. (1972). The technostructure. In *The new industrial state* (2nd ed.) (pp. 54-65). Boston, MA: Houghton-Mifflin.

Further reading:

Penrose, Edith. (2009) [1959]. The firm in theory. In *Theory of the growth of the firm* (pp. 8-27). Oxford: Oxford University Press.

Buchanan, James & Tullock, Gordon. (1962). The organization of human activity. In *The calculus of consent: Logical foundations of constitutional democracy* (pp.41-59). Ann Arbor, MI: University of Michigan Press.

Buchanan, James. (1965). An economic theory of clubs. *Economica, 32*(125): 1-14.

Chandler, Alfred. (1977). Introduction: the visible hand. In *The visible hand: the managerial revolution in American business.* Cambridge, MA: Belknap Press.

Schumpeter, Joseph. (1942). Can capitalism survive? In *Capitalism, socialism and democracy* (pp. 61-163). New York: Harper and Brothers.

Milgrom, Paul & Roberts, John. (1992). The boundaries and structure of the firm. In *Economics, organization and management* (pp. 538-84). Eaglewood Cliffs, NJ: Prentice Hall.

17 May: innovation as a public good —the appropriability problem

Topics covered: incentives, moral hazard, monopoly, rent-seeking, competition, public goods, free-riding, hold up

Required reading:

National Research Council. (2003). Innovation in information technology. In *Innovation in information technology* (pp. 5-29). Washington, DC: National Academies Press.

Further reading:

Arrow, Kenneth. (1962). Economic welfare and the allocation of resources for invention. In *The rate and direction of inventive activity* (pp. 609-26). Princeton, NJ: Princeton University Press.

Tullock, Gordon. (1988). Rents and rent-seeking. In C. Rowley et al (eds.) *The political economy of rent-seeking.* Boston: Klewer.

Milgrom, Paul & Roberts, John. (1990). Bargaining costs, influence costs, and the organization of economic activity. In J. Alt & K. Shepsle (eds.) *Perspectives on positive political economy* (pp. 57-89). Cambridge: Cambridge University Press.

Mahoney, Joseph. (1992). The choice of organizational form: vertical financial ownership versus other methods of vertical integration. *Strategic Management Journal, 13*(1): 559-84.

22 May: innovation in organizations part II —clusters, networks and regimes

Topics covered: collective action, cooperation, transaction costs, principal-agent problems, clusters, networks, regimes

Required reading:

Langlois, Richard (2007) Progressive rationalization. In *The dynamics of industrial capitalism* (pp. 1-25). London: Routledge.

Further reading:

Olson, Mancur. (1965). The "by-product" and "special interest" theories. In *Logic of collective action* (pp. 132-68). Cambridge, MA: Harvard University Press.
Scharpf, Fritz. (1997). Negotiated agreements. In *Games real actors play* (pp. 116-47). Boulder, CO: Westview Press.

Porter, Michael. (1998). Location, clusters and the "new" microeconomics of competition. *Business economics, 33*(1): 7-13.

Krugman, Paul. (1996). Making sense of the competitiveness debate. *Oxford Review of Economic Policy*, *12*(3): 17-25.

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

Langlois, Richard. (2003). The vanishing hand: the changing dynamics of industrial capitalism. *Industrial and corporate change, 12*(2): 351-85.

Ostrom, Elinor & Walker, James. (1997). Neither markets nor states: linking collective action processes in action arenas. In D. Mueller (Ed.) *Perspectives on public choice* (pp. 35-72). Cambridge: Cambridge University Press.

PART II: the political economy of innovation

24 May: innovation systems

Topics covered: regulation, education, research policy, labour market policy, R&D spending

Required reading:

Taylor, Mark Zachary. (2016). Introduction. In *The politics of innovation: why some countries are better than others at science and technology* (pp. 3-24). New York: Oxford.

Further reading:

OECD. (1994). *Assessing and expanding the science and technology knowledge base*. Paris: OECD Working Group on Innovation and Technology Policy.

List, Friedrich. (1885) [1841]. Introduction. In *National system of political economy* (pp. 61-82). Philadelphia, PA: JB Lippincott & Co.

Lundvall, Bengt-Ake. (1992). Introduction. In *National systems of innovation: towards a theory of innovation and interactive learning* (pp. 1-22). London: Printer.

Etzkowitz, Henry & Leydesdorff, Loet. (1996). Emergence of a triple helix of university-industry-government relations. *Science and Public Policy, 23*(1): 279-86.

Brzustowski, Tom. (2012). The innovation system. In *Why we need more innovation in Canada.* (pp. 67-93). Ottawa: Invenire.

Naosi, Jorge. (2000). Introduction: the NSI and R&D. In *Canada's national system of innovation* (pp. 3-32). Montreal: McGill-Queen's University Press.

29 May: institutions and innovation

Topics covered: political systems, varieties of capitalism, institutional friction

Required reading:

Dilli, Selin, Elert, Niklas, & Herrmann, Andrea. (2018). Varieties of entrepreneurship: exploring the institutional foundations of different entrepreneurship types through 'varieties-of-capitalism' arguments. *Small Business Economics, 51*(2): 293-320.

Further reading:

Hall, Peter & Soskice, David. (2001). An introduction to the varieties of capitalism. In P. Hall & D. Soskice (Eds.) *Varieties of capitalism: the institutional foundations of comparative advantage* (pp. 1-68). Oxford: Oxford University Press.

Hall, Peter & Gingerich, Daniel. (2009). Varieties of capitalism and institutional complementarities in the political economy: an empirical analysis. *British Journal of Political Science, 39*(3): 449-82.

Akkermans, Dirk, Castaldi, Carolina & Los, Bart. (2009). Do 'liberal market economies' really innovate more radically than 'coordinated market economies'? Hall and Soskice reconsidered. *Research Policy, 38*(1): 181-91.

Amable, Bruno. (2003). A comparative analysis of capitalism. In *The diversity of modern capitalism* (pp. 74-114). London: Oxford University Press

Witt, Michael A., & Jackson, Gregory (2016). Varieties of Capitalism and institutional comparative advantage: A test and reinterpretation. *Journal of International Business Studies, 47*(7): 778-806

Witt, Michael A. et al. (2018). Mapping the business systems of 61 major economies: a taxonomy and implications for varieties of capitalism and business systems research. *Socio-economic Review, 16*(1): 5-38.

31 May: capacity for innovation

Topics covered: comparative advantage, autonomy of the state, bureaucracy, technological sovereignty and technological dependence, knowledge transfer

Required reading:

Evans, Peter. (1995). States and industrial transformation. In *Embedded autonomy: states and industrial transformation* (pp. 3-20). Princeton, NJ: Princeton University Press.

Further reading:

Huggins, Robert & Thompson, Piers. (2017). Entrepreneurial networks and open innovation: the role of strategic and embedded ties. *Industry and innovation, 24*(4): 403-35.

Wolfe, David. (2009). Embedded clusters in the global economy. *European Planning Studies, 17*(2): 179-87.

Britton, John & Gilmour, James (1978). Framework for a strategy. In *The weakest link: a technological perspective on Canadian industrial underdevelopment.* (pp. 157-95). Ottawa: Science Council of Canada.

Stigler, George. (1971). The theory of economic regulation. *The Bell Journal of Economics and Management Science, 2*(1): 3-21.

Dixit, Avinash. (2002). Incentives and organizations in the public sector: an interpretive review. *The Journal of Human Resources, 37*(4): 696-727.

5 June: **MIDTERM EXAM**

PART III: politics and innovation in practice

7 June: the American innovation system

Topics covered: appropriations, security and defense

Required reading:

Mazzucato, Mariana. (2013). The US entrepreneurial state**.** In *The entrepreneurial state,* 2nd ed. (pp. 79-92). New York: Anthem Press.

Further reading:

Weiss, Linda. (2014). The national security state and technology leadership. In *America Inc.? Innovation and enterprise in the national security state* (pp. 1-20). Ithaca, NY: Cornell University Press.

Block, Fred. (2008). Swimming against the current: the rise of a hidden developmental state in the United States. *Politics and Society, 36*(2): 169-206.

Hollingsworth, Rogers. (1991). The logic of coordinating American manufacturing sectors. In J. Campbell, R. Hollingsworth & L. Lindberg (Eds.) *Governance of the American economy* (pp. 35-74). Cambridge: Cambridge University Press.

12 June: innovation and late industrialization

Topics covered: the developmental state and other models of late industrialization

Required reading:

Breznitz, Shane. (2007). Plurality, choice and the politics of industrial innovation. In *Innovation and the state: strategies for growth in Israel, Taiwan, and Ireland* (pp. 1-40). New Haven, CT: Yale University Press.

Further reading:

Wade, Robert. (1990). Politics of investment and industrial policy. In *Governing the market: economic theory and the role of government in East Asian industrialization* (pp. 256-96). Princeton, NJ: Princeton University Press.

Amsden, Alice. (1989). Industrializing through learning. In *Asia's next giant: South Korea and late industrialization* (pp. 3-24). New York: Oxford University Press.

Tyson, Laura & Zysman, John. (1989). Developmental strategy and production innovation in Japan. In C. Johnson et al (eds). *Politics and productivity: the real story of why Japan works* (pp. 59-140). Cambridge, MA: Ballinger Press.

14 June: innovation and development

Topics covered: institutional design, governance problems

Required reading:

Khan, Mushtaq. (2013). Technology policies and learning with imperfect governance. In J. Stiglitz & J. Yifu (Eds.) *The industrial policy revolution I* (pp. 79-115). New York: Palgrave Macmillan.

Further reading:

Hall, Rodney. (2003). The discursive demolition of the Asian development model. *International Studies Quarterly, 47*(1): 71-99.

Burki, Shahid & Guillermo, Perry. (1998). Institutions matter for development. In *Beyond the Washington consensus* (pp. 9-24). Washington, DC: World Bank.

Schick, Allen. (1998). Why most developing countries should not try New Zealand's reforms. *World Bank Research Observer, 13*(1): 123-31.

Picciotto, Robert. (1995). The fundamentals of institutional design. In *Putting institutional economics to work* (pp. 6-12). Washington, DC: World Bank.