

**Department of Political Science
School of Graduate Studies**

University of Toronto

**Innovation and Knowledge Transfer in City Regions
JPJ 494H1S/Pol 2394S
Winter, 2012**

Instructor: David A. Wolfe
PROGRIS, Munk School of Global Affairs
Office: 367S, Munk Centre
Office Hours: Wednesday, 4:00-5:00 pm
Phone: 416-946-8922
Email: david.wolfe@utoronto.ca

Time: Wednesday, 2:00-4:00 pm
Room: Room 148, University College

Course Description:

This course surveys two of the key themes related to the process of innovation in a knowledge-based economy: the process by which new knowledge is generated and effectively transferred to those organizations with the potential to commercialize it; and secondly, the paradoxical relationship between knowledge creation and proximity in a modern global economy. Increasingly the global economy is seen as a knowledge-based one, hence the critical importance of understanding how new knowledge is generated and deployed in the form of new products and processes. At the same time, the more global the economy becomes, the greater the value of proximity, hence the fascination with how to foster the growth of new regional concentrations of knowledge and innovation, such as Silicon Valley. This course surveys the state of current knowledge about both these processes and explore the implications of this understanding for public policies designed to stimulate knowledge transfer and promote the growth of dynamic and innovative city-regions.

Required Reading:

Course Kit (available from instructor)

Course Evaluation:

Evaluation will consist of a research paper of 25-30 pages (70%) for graduates; and an essay proposal (10%) and research paper of 20 to 25 pages (60%) for undergraduates. Seminar participation and presentations will be worth 30% of the grade for all students. Essay proposals are due in class on **February 15**. Essays are due at the end of the term. A penalty of 1% per week day will be deducted for late essays and proposals.

Topics:**1. Introduction to the course and discussion of outlines****2. Innovation and Local Economic Development**

- *Rodríguez-Pose, Andrés and Ricardo Crescenzi, 2008, "Mountains in a flat world: why proximity still matters for the location of economic activity," *Cambridge Journal of Regions, Economy and Society* 1: 371-388.
- *Pike, Andy, Andrés Rodríguez-Pose and John Tomaney, 2006, *Local and Regional Development*, pp. 96- 113.
- *Maskell, Peter and Anders Malmberg, 1999, "Localised learning and industrial competitiveness," *Cambridge Journal of Economics* 23: 167-185.
- *Storper, Michael, 1995, "The Resurgence of Regional Economies, Ten Years Later: The Region as a Nexus of Untraded Interdependencies," *European Urban and Regional Studies* 2: 191-221.
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3. Innovation and the Firm

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Rothwell, Roy, 1994. "Industrial Innovation: Success, Strategy, Trends," in M. Dodgson and R. Rothwell, eds, *The Handbook of Industrial Innovation*, pp. 33-53.

Pavitt, Keith, 1991, "What makes basic research economically useful?" *Research Policy*, 20 109-119.

Rosenberg, Nathan, 1990, "Why do Companies do Basic Research With Their own Money," *Research Policy*, 19, 165-170.

4. Tacit Knowledge, Open Innovation and Asymmetric Knowledge Capabilities

*Senker, Jacqueline, 1995, "Tacit Knowledge and Models of Innovation," *Industrial and Corporate Change* 4:2 (pp. 425-447).

*Gertler, Meric S. 2003. "Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there)," *Journal of Economic Geography* 3: 75-99.

*Chesborough, Henry. *Open Innovation: The New Imperative for Creating and Profiting from Technology*, ch. 3, pp. 43-62.

*Cooke, Phil, 2005, "Regionally asymmetric knowledge capabilities and open innovation: Exploring 'Globalisation 2' – A new model of industry organisation," *Research Policy* 34: 1128-1149.

Jacqueline Senker and Wendy Faulkner, "Networks, Tacit Knowledge and Innovation," in Rod Coombs et al., eds, *Technological Collaboration: The Dynamics of Cooperation in Industrial Innovation*

Nonaka, Ikujiro, Ryoko Toyama and Akiya Nagata, 2000, "A Firm as a Knowledge-creating Entity: A New Perspective on the Theory of the Firm," *Industrial and Corporate Change* 9:1, pp. 1-20.

Nonaka, Ikujiro and Hirotaka Takeuchi, *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*

Nonaka, Ikujiro and David J. Teece, eds, 2000, *Managing Industrial Knowledge: Creation, Transfer and Utilization*

John Seely Brown and Paul Duguid, *The Social Life of Information*

Foray, Dominique and Bengt-Åke Lundvall, 1996, "The Knowledge-Based Economy: From the Economics of Knowledge to the Learning Economy," in *Employment and Growth in the Knowledge-Based Economy*, OECD Paris.

5. Universities and Regional Economic Development

*Feller, Irwin, 1999, "The American University System as a Performer of Basic and Applied Research" in *Industrializing Knowledge*, Ed. Lewis M. Branscomb, Fumio Kodama, and Richard Florida, pp. 65-101.

*Feldman, Maryann and Ian Stewart, 2008. "Wellsprings of Modern Economic Growth: Higher Education, Innovation and Local Economic Development," in *Annual World Bank Conference on Development Economics 2008*.

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*Bramwell, Allison and David A. Wolfe, 2008, "Universities and Regional Economic Development: The Entrepreneurial University of Waterloo," *Research Policy* 37(8): 1175-87.

Geiger, Roger and Creso M. Sá, *Tapping the Riches of Science: Universities and the Promise of Economic Growth*

Wolfe, David A. 2009, "Universities and Knowledge Transfer: Powering Local Economic and Cluster Development," in *Research and Innovation Policy: Changing Federal Government-University Relations*, eds G. Bruce Doern and C. Stoney

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Roger L. Greiger, 2004, *Knowledge and Money: Research Universities and the Paradox of the Marketplace*.

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- Crow, Michael M. And Christopher Tucker, 2001, "The American Research University System as America's *de facto* Technology Policy," *Science and Public Policy* 28:1 (February): 2-10.
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- Florida, Richard, and Wesley M. Cohen, 1999, "Engine or Infrastructure? The University role in Economic Development," in *Industrializing Innovation*, Ed. Lewis M. Branscomb, Fumio Kodama, and Richard Florida, 589-610.
- Rosenberg, Nathan and Richard R. Nelson, 1994, "American universities and technical advance in industry," *Research Policy* 23:3 pp.323-348.
- Faulkner, Wendy, and Jacqueline Senker, 1995, *Knowledge Frontiers: Public sector research and Industrial Innovation in Biotechnology, Engineering Ceramics, and Parallel Computing*.

6. Regional Innovation Systems / Clusters/ Learning Regions

- *Morgan, Kevin. 2004. "The exaggerated death of geography: learning, proximity and territorial innovation systems," *Journal of Economic Geography* 4: 3-21.
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- *Wolfe, David A. and Meric S. Gertler, 2005, "Clusters from the Inside and Out: Local Dynamics and Global Linkages," *Urban Studies* 41, 5/6: 1071-1093.
- *Wolfe, David A. 2009, "Introduction: Embedded Clusters in the Global Economy," *European Planning Studies* 17,2: 179-187.
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7. Path Dependence and Local/Regional Development

- *Martin, Ron, 2011. "Regional Economies as Path Dependent Systems: some issues and implications," in *Handbook of Regional Innovation and Growth*, ed P. Cooke at al.
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8. Cities and Innovation

*Wolfe, David A. 2009. *21st Century Cities in Canada: The Geography of Innovation*, ch. 1 & 2. Online at: <http://www.conferenceboard.ca/documents.aspx?did=3311>.

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9. Creativity and the Economic Geography of Talent

*Florida, Richard, Charlotta Mellander and Kevin Stolarick, 2008. "Inside the black box of regional development: human capital, the creative class and tolerance," *Journal of Economic Geography* 8: 615-649.

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10. Urban Governance for the Knowledge Economy

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- *Safford, Sean, 2009. *Why the Garden Club Couldn't Save Youngstown: The Transformation of the Rustbelt*, ch. 6
- Rodríguez-Pose, Andrés, 2008. "The Rise of the 'City-Region' Concept and its Development Policy Implications," *European Planning Studies* 16(8): 1025-1046.
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11. Regional Resilience and Economic Development

- *Christopherson, Susan, Jonathan Michie and Peter Tyler, 2010. "Regional resilience: theoretical and empirical perspectives," *Cambridge Journal of Regions, Economy & Society* 3, 3-10.
- *Simmie, James and Ron Martin, 2010. "The economic resilience of regions: towards an evolutionary approach," *Cambridge Journal of Regions, Economy & Society* 3, 27-43.
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12. Policy Implications

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