



UNIVERSITÀ
DEGLI STUDI
DI PADOVA

**Ph.D. Program in “Economics and Management”
2019-2020**

Knowledge Management
(20 hours)

Prof. Eleonora Di Maria
Dept. of Economics and Management
Via del Santo, 33
Email: eleonora.dimaria@unipd.it
Tel. +39 8274069

Prof. Silvia Rita Sedita
Dept. of Economics and Management
Via del Santo, 22
Email: silvia.sedita@unipd.it
Tel. +39 8274236

Course description

The course aims at offering an integrated vision of approaches concerning knowledge management within the firm and its role in firm’s competitiveness. The course offers an analysis of theoretical contributions that discuss about knowledge management in collaborative environment and network framework.

The course covers the following topics:

- a) Learning, knowledge management and the firm
- b) Types of knowledge: from tacit knowledge to codification
- c) Knowledge co-production: communities of practice
- d) Knowledge networks and innovation
- e) Knowledge management and geography
- f) University-industry knowledge transfer

Grading

The grades will be based on the following components:

- Class participation, materials reading and comprehension: 20%
- Paper presentation and discussion: 40%
- Term Paper: 40%

Readings

Each student is supposed to have read the papers indicated in this syllabus before attending the courses. Students will be assigned specific references (1 or 2 articles) that will be presented and discussed with the instructors and peers in classes. Each student will prepare a presentation of 20 minutes (power point slides required) for each of the papers assigned,

followed by 10 minutes of discussion. Refer to Appendix 1 for an outline of how to address the structure and content of the presentation.

Term paper

Each student is expected to write a term paper on a topic relating to the course; specific topics will be clarified and assigned to students at the end of the course by the instructor.

Acceptable forms include:

1. A conceptual study. The paper could be an extensive literature review of a relatively narrow topic related to material studied (supplementary readings as a first support).
2. A plan for an empirical study. This would provide a literature review, identify a focused research opportunity, and then suggest a research design to conduct the research.

The papers are expected to be between 5,000 and 8,000 words inclusive of all exhibits and references. Instructor will communicate the deadline for the submission within the final exam period.

Class 1 – Knowledge management, forms of knowledge and the firm (February 4th – 3 hours) – Prof. E. Di Maria

Arrow K.J. (1969), "Classificatory notes on the production and transmission of technical knowledge", *American Economic Review* P&P, 59.

Grant R.M. (1996), "Toward a knowledge-based theory of the firm", *Strategic Management Journal*, vol. 17, Winter.

Kogut B., Zander U. (1996), "What firms do? Coordination, Identity, and Learning", *Organization Science* vol. 7, n. 5.

Nonaka I. (1994), "A Dynamic Theory of Organizational Knowledge Creation", *Organization Science*, Vol.5, n.1

Jensen, M., Johnson, B., Lorenz, E., & Lundvall, B. (2007). Forms of knowledge and modes of innovation. *Research Policy*, 36(5), 680–693. doi:10.1016/j.respol.2007.01.006

Cohen W., Levinthal D. (1990), "Absorptive Capacity: a New Perspective on Learning and Innovation", *Administrative Science Quarterly*, vol. 35, pp. 128-152.

Class 2 – Managing Knowledge: codification (February 21st 3 hours) – Prof. E. Di Maria

March J.G. (1991), "Exploration and Exploitation in Organizational Learning", *Organization Science*, vol. 2, n. 1.

Von Hippel, E. (1994). Sticky information and the locus of problem solving: implications for innovation. *Management Science*, 40(4), 429-429.

Baldwin C.Y., Clark K.B. (1997), "Managing in an Age of Modularity", *Harvard Business Review*, September-October.

Sanchez R., Mahoney J.T. (1996), "Modularity, Flexibility, and Knowledge Management in Product and Organization Design", *Strategic Management Journal*, Vol. 17, Winter Special Issue.

Arora A., Gambardella A., Rullani E. (1998), "Division of Labour and the Locus of Inventive Activity", *Journal of Management and Governance*, n. 1, Fall.

Hansen M.T., Nohria N., Tierney T. (1999). "What's your strategy for managing knowledge?". *Harvard Business Review*, Vol. 77, No. 2 (March-April), pp. 106-116.

Class 3 – Communities of practice (February 24th - 4 hours) - Prof. E. Di Maria

- Lave J., Wenger E. (1991) *Situated Learning*, Cambridge University Press, Cambridge, Mass. (selected chapters)
- Boland R.J., Tenkasi, R.V., (1995). "Perspective making and perspective taking in communities of knowing", *Organization Science*, vol. 6(4): 350-372
- Brown J.S., Duguid P. (1991), "Organizational Learning and Communities-of-practice: Toward a Unified View of Working, Learning and Innovation", *Organization Science*, Vol.2, n. 1.
- Brown, J. S., & Duguid, P. (2001). "Knowledge and organisation: A social-practice perspective". *Organization Science*, 12(2), 198-213.
- Wenger E., Snyder W.M. (2000), "Communities of Practice: The Organizational Frontier", *Harvard Business Review*, January-February.
- Sawhney M., Prandelli E. (2000), "Communities of Creation: Managing Distributed Innovation in Turbulent Markets", *California Management Review* n. 4, Summer.

Class 4 – Knowledge networks and innovation (March 3rd - 2 hours)- Prof. Sedita

- Powell, W. 1990. Neither market nor hierarchy: network forms of organisation. *Research in Organization Behaviour*, 12: 295–336.
- Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative Science Quarterly*, 41: 116-145.
- Laursen, K., & Salter, A. (2006). Open for Innovation: The Role of Openness in Explaining Innovation Performance Among U.K. Manufacturing Firms. *Strategic Management Journal*, 27(2), 131–150.

Class 5 – Knowledge management and geography (March 9th - 4 hours) Prof. Sedita

- Owen-Smith, J., & Powell, W. W. (2004). Knowledge networks as channels and conduits: The effects of spillovers in the Boston biotechnology community. *Organization Science*, 15(1), 5-21
- Bathelt H, Malmberg A, Maskell P, 2004, "Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation" *Progress in Human Geography* 28 31 ^ 56
- Giuliani, E., & Bell, M. (2005). The micro-determinants of meso-level learning and innovation: evidence from a Chilean wine cluster. *Research Policy*, 34(1), 47-68.
- Morrison, A. (2008) Gatekeepers of knowledge within industrial districts: Who they are, how do they interact? *Regional Studies*, 42(6), pp. 817–835.
- Moodysson J, Coenen L, Asheim B, 2008, "Explaining spatial patterns of innovation: analytical and synthetic modes of knowledge creation in the Medicon Valley life-science cluster" *Environment and Planning A* 40(5) 1040 – 1056
- Belussi F. S. Sedita (2012), Industrial districts as open learning systems: combining emergent and deliberate knowledge structures, *Regional Studies*, 46,2, p. 165-184.

Class 6 – University-industry knowledge transfer (March 10th – 4 hours) Prof. Sedita

- Etzkowitz, H., & Leydesdorff, L. (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.

- Zucker, L. G., Darby, M. R., & Armstrong, J. S. (2002). Commercializing knowledge: University science, knowledge capture, and firm performance in biotechnology. *Management Science*, 48(1), 138-153.
- D'Este, P., & Patel, P. (2007). University–industry linkages in the UK: What are the factors underlying the variety of interactions with industry?. *Research Policy*, 36(9), 1295-1313.
- Baba, Y., Shichijo, N., & Sedita, S. R. (2009). How do collaborations with universities affect firms' innovative performance? The role of "Pasteur scientists" in the advanced materials field. *Research Policy*, 38(5), 756-764.
- Shichijo, N., Sedita, S. R., & Baba, Y. (2015). How does the entrepreneurial orientation of scientists affect their scientific performance? Evidence from the quadrant model. *Technology Analysis & Strategic Management*, 27(9), 999-1013.
- Perkmann, Markus, Valentina Tartari, Maureen McKelvey, Erko Autio, Anders Broström, Pablo D'Este, Riccardo Fini et al. "Academic engagement and commercialisation: A review of the literature on university–industry relations." *Research Policy* 42, no. 2 (2013): 423-442.

APPENDIX 1 – Assessing a scholarly article

1. Motivation and literature review

- Is the research question interesting and relevant based on the literature review?
- Do they review the literature relevant to the research question?

2. Theoretical framework

- Is it clear which theory or theories the authors draw from to develop their hypotheses and are they fully explored?

3. Methodology

- Are the methods consistent with the theory?
- Are the data collection efforts unbiased?
- Does the data offer adequate control variables?
- Are the variables measured in a reasonable way and consistently with the theoretical framework?

4. The discussion

- Does it correctly reconcile the theory and evidence found in the paper?
- Does it place the paper in the context of the larger literature?
- Does it identify limitations and opportunities for future research?