

Industrial Transformation and Technical Change 7.5 credits

Industriell omvandling och teknisk förändring 7.5 hp

Second cycle

Main field: Industrial Management, Second cycle, has only first-cycle course/s as entry requirements (AIN)

Syllabus is adopted by the Research and Education Board (2019-03-15) and is valid for students admitted for the autumn semester 2023.

Placement in the Academic System

The course is included in the Master's Programme (120 credits) in Industrial Management and Innovation.

Prerequisites and Conditions of Admission

Bachelor's degree in Engineering or the equivalent of 180 Swedish credit points or 180 ECTS credits at an accredited university, and Industrial organisation 15 credits on first level.

Applicants must have written and verbal command of the English language equivalent to English course 6 in Swedish Upper-Secondary School.

Course Objectives

The course's main objective is to introduce the students to analytical frameworks and tools that enable them to get a good understanding of the relationship between technological change and industrial transformation and get an ability to make relevant conclusions for strategy and policy. Students will develop knowledge and skills to describe, analyze and explain how industries and companies develop and change. In the course, the students develop a critical and constructive attitude towards different analytical frameworks and how the strategy/policy problems are framed.

Following successful completion of the course the student should:

Knowledge and understanding

- Describe and explain different patterns of consumption and why the change.
- Compare and analyze various innovations and innovation patterns from an industrial perspective.
- Describe and compare different models for division of labor and value chains, and the change in the industries and clusters over time.

Skills and ability

- Develop explanation models for industrial change, including relationships between established and newly established actors.

- Derive and group strategic and managerial implications of industrial, technological and institutional changes, including disruptions.
- Derive and characterize management and policy problems in relation to industrial dynamics.
- Independently plan, conduct, report and present a scientific study both written and orally, within specified time frames.

Judgement and approach

- Critically evaluate and compare the usefulness of various analytical frameworks.

Primary Contents

The course consists of three parts:

Part 1:

Focuses on why individuals and other types of actors consume, and how consumption patterns change over time.

Part 2:

Focuses on the relationship between technological discontinuities, corporate business model innovation and business strategy including so-called "first mover advantages". Relationship, influence and roles between established businesses, entrepreneurial start-ups and diversified companies from other industries are presented and analyzed.

Part 3:

Here, there is a shift from the level of industry analysis to the analysis of the sectorial/ technological innovation system. The innovation System growth and change, and how this affects and is affected by the company's strategy and policy are presented.

Teaching Formats

Teaching methodology includes lectures, seminars, and workshops.

Examination

The overall grades of F (Insufficient), E (Sufficient), D (Satisfactory), C (Good), B (Very Good), A (Excellent) will be awarded for the course.

The examination consists of a written Exam.

Name of the test		Grading
Written Examination	7,5 credits	F/E/D/C/B/A

If there are special reasons, the examiner may make exceptions from the specified examination format and allow a student to be examined in another way. Special reasons can e.g. be a decision on learning support.

For elite sports students according to Riktlinjer för kombinationen studier och elitidrott vid Högskolan i Halmstad, DNR: L 2018/177, the examiner has the right to decide on an adapted examination component or let the student complete the examination in an alternative way.

Course Evaluation

Course evaluation is part of the course. This evaluation should offer guidance in the future development and planning of the course. Course evaluations should be documented and made available to the students.

Course Literature and Other Study Resources

Beinhocker, E. D. *The Origin of Wealth. Evolution, Complexity, and the Radical Remaking of Economics*. Harvard Business School Press, 2006.

Referenslitteratur

Aley, J. (1996) Give it Away and Get Rich, *Fortune*, Vol. 133, Issue 11, pp 90-95.

Baldwin, C. Y. (2008) Where do Transactions Come From? Modularity, Transactions, and the boundary of the Firm, *Industrial and Corporate Change*, Vol. 17, No. 1, pp. 155-195.

Bogers, M., Afuah, A., and Bastian, B. (2010) Users as Innovators: A Review, Critique, and Future Research Directions, *Journal of Management*, Vol.36, No. 4, pp. 857-875.

Bower, J.L., Christensen, C.M. (1995) Disruptive Technologies: Catching the Wave, *Harvard Business Review*, Vol. 73(1), pp.43-53.

Frank, R. H. *The Biggest Dog Wins the Bone: Decoding Market Place Signals*. In *The Economic Naturalist. Why Economics Explains Almost Everything*, Virgin Books, 2008, pp. 138-154.

Greenspan, A. *The Age of Turbulence*, Penguin Books, 2008, ch. 13, pdf in the course portal.

Holmén 2005. *Definitions and concepts*.

Jacobs, J. *The Economy of Cities*. Vintage Books, 1970, pp. 49-84.

Khaire, M., and Whadwani, R.D. (2010) Changing Landscapes: The Construction of Meaning and Value in a New Market Category—Modern Indian Art, *Academy of Management Journal*, Vol. 53, No.6, pp. 1281–1304.

Kline, S. and Rosenberg, N. (1986): 'An Overview of Innovation,' in R. Landau and N.

Rosenberg (eds), *The Positive Sum Strategy: Harnessing Technology for Economic growth*, Washington DC: National Academy Press. pp 275305.

Lepak, D. P., Smith, K. G., and Taylor, M. S. (2007) Value Creation and Value Capture: A Multilevel Perspective, *Academy of Management Journal*, Vol. 32, No. 1, pp. 180-194.

Miller, G. (2009) *Spent: Sex, Evolution and Consumer Behaviour*. Viking, extracted pages.

Moran, P. and Ghoshal, S. (1999) Markets, Firms and the Process of Economic Development, *The Academy of Management Review*, Vol. 24, No. 3, pp. 390-412.

Nelson, R. R. and Winter, S. G. (2002) Evolutionary Theorizing in Economics, *The Journal of Economic Perspectives*, Vol. 16, No. 2, pp. 23-46.

Nightingale, P., Brady, T., Davies, A., and Hall, J. (2003) Capacity Utilization Revisited: Software, Control, and the Growth of Large Technical Systems, *Industrial and Corporate Change*, Vol. 12, No. 3, pp.477-517.

North, D. C. (1994) Economic Performance through Time, *The American Economic Review*, Vol. 84, No. 3, pp. 359-386.

Pisano, G. P. and Teece, D. J. (2007) How to Capture Value from Innovation: Shaping Intellectual Property and Industry Architecture, *California Management Review*, Vol. 50, No. 1, pp. 278-296.

Tidd, J., Bessant, J. and Pavitt, K. (2005) Notes on innovation. *Extracts from Managing Innovation. Integrating Technological, Market and Organizational Change*, Wiley, 3rd edition.

Utterback, J. M. and Suarez, FF. (1993) Innovation, competition and industry structure, *Research Policy*, 22, 1-21.

Vargo, S. L. and Lusch, R. F. (2004) Evolving to a New Dominant Logic for Marketing, *Journal of Marketing*, Vol. 68, pp. 1-17, pdf in the course portal.

Wise, R. and P. Baumgartner (1999), 'Go Downstream: The New Profit Imperative in Manufacturing', *Harvard Business Review*, September-October, 133-141, pdf in the course portal.