

Syllabus

Intellectual Property Management (3 ECTS)

Approved by
Academic Council
of the Master's Programme
Minutes AC2

Author, lecturer (e-mail, webpage)

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1. Course Description

a) Pre-requisites

- Basics of economics and / or management;
- Basics of policy and institutional analysis;
- Basic understanding of the relationships between STI and socio-economic development;
- Interdisciplinary and systemic thinking.

b) Abstract

Intellectual property rights are a means of protecting the use of inventions, technologies and knowledge for the party holding such right. Increasingly for companies but also research based institutions like universities and public research institutions the question arises which knowledge and inventions to protect against other parties use, in which geographic scope, in which application fields etc. to aim at such protection.

Also the issue becomes crucial which share of knowledge and technology to protect measured against the overall knowledge and intellectual assets available. Furthermore the question arises how to evaluate intellectual property and how to determine the contribution of intellectual property to economic value in tradable goods. The course gives an introduction into the management of intellectual property by means of intellectual property rights. A variety of types of intellectual rights are discussed in a strategic company context, e.g. from the view of intellectual property as strategic weapons for the holder and owner of intellectual property. Special attention is given to the valuation of intellectual property and portfolio management approaches.

Post-requisites: no.

2. Learning Objectives

- Creating informed judgment for intellectual property policy decisions to foster an innovative economy on company, regional and national level;
- Setting standards for monitoring intellectual property policies in support of Science, Technology and Innovation (STI).

3. Learning Outcomes

- Understanding of the key concepts of IP and the impact of the intellectual property system on markets, research and developments (R&D), and innovations;
- Critical thinking about IP strategies development on corporate, national and international levels;
- Knowledge about IP assessment and valuation methods and understanding of significant policy issues in intellectual property enforcement.

4. Course Plan and Content

Topic (course section)	Total hrs ¹			Expected learning outcomes (ELO) to be assessed	Assessment formats
	LC	SM	SW		
Topic 1. Meaning of IPR in innovation management	2	0	8	Explain the role of IPR for R&D&I management, and nature of IP and its history	Open question
Topic 2. Typology of IPR	2	0	8	Explain the difference between types of IPR with specifics of national regulations and special conditions	Test
Topic 3. Inventorship. Ownership. Service works	2	0	8	Describe the difference between inventorship and ownership, explain the core of the inventor compensation law	Open question
Topic 4. IP agreements. Invention disclosure systems assessment	2	2	8	Describe the approaches to technical and newness assessment of invention disclosures and apply the reporting guidelines for invention disclosures	Drafting a contract
Topic 5. Strategies for protecting IP	2	2	8	Explain the principles of choosing strategy for IP protection, apply the factors of regional scope and claim scope to the choice of protection	Case-solving

¹ Leave blank for syllabi, which are not part of a degree programme curriculum and not planned for a schedule

<i>Topic</i> 6. Defending intellectual property rights	2	2	8	Provide comparative analysis of defense strategies	Home-prepared presentation at the seminar (individual)
<i>Topic</i> 7. Assessment and valuation of IP	2	2	8	Apply assessment approaches to royalty negotiations	Case-solving
<i>Topic</i> 8. Auditing intellectual property right portfolios	2	0	8	Explain the principal approaches to financial assessment of IPR portfolios	Open question
<i>Topic</i> 9. Building and managing portfolios of IP	2	2	8	Critically analyse the process of creating strategy IPR families on corporate, national and international levels	Home-prepared presentation at the seminar (team project)
<i>Topic</i> 10. IP exploitation and use strategies	0	4	10	Build and defend the approach to the type of IP exploitation in frame of specific project	Business game
TOTAL	18	14	82		

Course formats:

LC – lectures;

SM - seminars/practical courses/ laboratory work;

Onl. –online lectures and other Internet courses;

SW – student independent work.

Course section contents:

Topic 1. Meaning of IPR in innovation management:

- Output and information role of IPR for R&D&I management
- Organization and finance of IPR management
- Nature of IP and its history
- Changes in IPR management as a result of the digital transformation.

Topic 2. Typology of IPR:

- Types of IPR
- National regulations and special conditions

- Copyrights
- Patents
- Patent families
- Trademarks

Topic 3. Inventorship. Ownership. Service works.

- Inventorship vs. ownership
- Joint ownership
- IP assignment
- Employee IPR training schemes
- Incentive and reward schemes
- Inventor compensation law

Topic 4. IP agreements. Invention disclosure systems assessment:

- Reporting guidelines for invention disclosures
- Technical and newness assessment of invention disclosures
- Strategic importance of inventions

Topic 5. Strategies for protecting IP:

- Choice of protection – regional scope and claim scope
- Application protection vs. misleading information function

Topic 6. Defending intellectual property rights:

- Detecting violations
- Defense strategies

Topic 7. Assessment and valuation of IP:

- Qualitative assessment
- Monetary assessment
- Assessment for royalty negotiations

Topic 8. Auditing intellectual property right portfolios:

- Financial assessment of IPR portfolios

Topic 9. Building and managing portfolios of IP:

- Creation of strategy IPR families

Topic 10. IP exploitation and use strategies:

- Internal and external exploitation

- Licensing of Innovation
- IP for Mergers and Acquisitions

5. Reading List

a) Required

- Junghans C., Levy A. Intellectual Property Management. A Guide for Scientists, Engineers, Financiers, and Managers, WILEY 2006.
- Thomas Y. Choi, Jaroslaw Budny and Norbert Wank. Intellectual property management: a knowledge supply chain perspective. Business Horizons, 2004.
- Bader M.A. Intellectual Property Management in R&D Collaborations. The Case of the Service Industry Sector. Springer, 2006.
- Frank Steven J. Intellectual Property for Managers and Investors. A Guide to Evaluating, Protecting and Exploiting IP, Cambridge University Press, 2001.

b) Optional

Topic 1. Meaning of IPR in innovation management

- The Wealth of Knowledge: Converting Intellectual Property to Intellectual Capital in Competitive Research and Technology Management Settings// International Journal of Technology Management, vol. 17, n. 3/4, 1998
- Allison, R., M. Lemley and J. Walker (2009), Extreme Values or Trolls on Top? The Characteristics of the Most Litigated Patents, Pennsylvania Law Review 158(1):1-38
- Rosenbaum B., Reilly H., Widmer M., Deloitte LLC (2013). Protecting intellectual property rights. Challenges, opportunities, and solutions. URL: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/public-sector/us-fed-protecting-intellectual-property-rights.pdf>

Topic 2. Typology of IPR

- Hall, B.H. (2007), Patents and Patent Policy, Oxford Review of Economic Policy 23(4): 568-587, URL: www.elsa.berkeley.edu/~bhhall/papers/BHH07_OxREP_patents.pdf.
- Cohen, W. M., R. R. Nelson and J. P. Walsh (2000). Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or not). Cambridge.

Topic 3. Inventorship. Ownership. Service works.

- Corrado, C.A., C.R. Hulten, and D.E. Sichel (2006), Intangible Capital and Economic Growth, NBER Working paper 1948, URL: <http://www.nber.org/papers/w11948.pdf>.

Topic 4. IP agreements. Invention disclosure systems and assessment

- Katz, M.L. and C. Shapiro (1985). On the licensing of innovation, *Rand Journal of Economics* 16(4): 504–520.
- Ernst, H., C. Leptien and J. Vitt (2000). "Inventors Are Not Alike: The Distribution of Patenting Output Among Industrial R&D Personnel." *IEEE Transactions of Engineering Management*

Topic 5. Strategies for protecting IP

- Chesbrough, H. (2003), *Open Innovation, The New Imperative of Creating and Profiting from Technology*, Harvard Business School Press.
- Competition, patents and innovation II (OECD, 2010). Materials of the OECD Competition Committee meeting: pp.7-9, 215-234. URL: <http://www.oecd.org/daf/competition/45019987.pdf>
- Clarysse, B. et al. (2005), Spinning Out New Ventures: A Typology of Incubation Strategies from European Research Institutions, *Journal of Business Venturing* 2: 183- 216.

Topic 6. Defending intellectual property rights

- Gilbert, R. and D. Newberry (1982). "Preemptive Patenting and the Persistence of Monopoly." *American Economic Review*
- Gilbert, R. and C. Shapiro (1990). "Optimal Patent Length and Breadth." *RAND Journal of Economics*
- Lanjouw, J. O. (1998). "Patent Protection in the Shadow of Infringement: Simulation Estimations of Patent Value." *Review of Economic Studies*

Topic 7. Assessment and valuation of IP

- Baldwin, J. R., P. Hanl and D. Sabourin (2000), Determinants of Innovative Activity in Canadian Manufacturing Firms: the Role of Intellectual Property Rights, *Statistics Canada Working Paper No. 122*, Ottawa.
- King, K. (undated), *The Value of Intellectual Property, Intangible Assets and Goodwill*. Available at: http://www.wipo.int/sme/en/documents/value_ip_intangible_assets.htm.

Topic 8. Auditing intellectual property right portfolios

- Graham, S., R. Merges, P. Samuelson and T. Sichelman (2009), High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey, *Berkeley Technology Law Journal* 24(4): 1255-1328.
- Pithelky, R. (1999). *The Valuation of Patents: A Review of Patent Valuation Methods with Consideration of Option Based Methods and the Potential for Further Research*, Judge Institute Working Paper WP 21/97. Cambridge/UK.
- Daiko T., Dernis H., Dosso M., Gkotsis P., Squicciarini M., Vezzani A. (2017). *World Corporate Top R&D Investors: Industrial Property Strategies in the Digital Economy*. A JRC and OECD common report. Luxembourg: Publications

Office of the European Union. URL: <http://www.oecd.org/sti/world-top-rd-investors.pdf>

Topic 9. Building and managing portfolios of IP

- Jeremy Burdon IP Portfolio Management: Negotiating the Information Labyrinth. URL: <http://www.iphandbook.org/handbook/chPDFs/ch12/ipHandbook-Ch%2012%2004%20Burdon%20IP%20Portfolio%20Management%20rev.pdf>

Topic 10. IP exploitation and use strategies

- LIMA (2011). Types of Licensing. International Licensing Industry Merchandisers' Association. URL <https://www.licensing.org/education/intro-to-licensing/types-of-licensing/>
- Loikkanen, T, Konttinen, J, Hyvönen, J, Ruotsalainen, L, Tuominen K, Waris, M, Hyttinen V-P, and Ilmarinen, O. (2009). Acquisition, Utilization and the Impact of Patent and Market Information on Innovation Activities. VTT Research Notes 2484. Espoo
- William W. Fisher III, Felix Oberholzer-Gee (2013). Strategic Management of Intellectual Property: an integrated approach. California Management Review, Vol. 55, No. 4, pp. 157–183.

6. Grading System

The overall course grade (10-point scale) is calculated as a sum of $G = 0,5F + 0,25CA + 0,25HT$, and includes results achieved by students in their exam (F), class assignment (CA) and Home task (HT); it is rounded up to an integer number of points.

Summary Table: Correspondence of ten-point to five-point system's marks

Ten-point scale [10]	Five-point scale [5]
1 – unsatisfactory 2 – very bad 3 – bad	Unsatisfactory – 2
4 – satisfactory 5 – quite satisfactory	Satisfactory – 3
6 – good 7 – very good	Good – 4
8 – nearly excellent 9 – excellent 10 – brilliant	Excellent – 5

Education control forms	Amount
Class assignment (CA)	4 (1 – tests, 1 – case-solving, 1 business game, 1 – open question)

Home task (HT)	4 (2 home-prepared presentation at the seminar (1- individual, 1 - team project), 1 – drafting a contract, 1 – case-solving)
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In case of blocking elements being present at the results achieved by student in his/her class assignment (CA) and Home task (HT) (blocking element is equal or higher than 30% while overall grade of CA and HT is 50% of the total grade), student has to retake this element before the exam period.

7. Examination Type

Final exam (F) is a written exam (60 minutes) which includes answers to 2 open questions. Full answer value is 10 credits (correct and full answers to 2 questions).

8. Methods of Instruction

The course combines lectures and seminars through a participatory sessions and group work. Lectures are designed to clarify major theoretical concepts of intellectual property rights. Seminars are aimed at sharing the students' reflections on the approaches introduced in the literature and developing analytical and practical skills required to professionally discuss topics aroused during the course. The students are expected to be ready for discussions using the recommended readings and lecture materials.

9. Special Equipment and Software Support

Classrooms for lectures and seminars provide proper use and presentations of particular topics, specifically:

- PC with internet access and office software or laptop;
- multimedia projector;
- screen;
- flipchart;
- paper for the flipchart;
- markers for the flipchart.

10. Organization of studies for persons with limited mobility and disabilities

If necessary, learners with limited mobility or a disability (as per his/her application), as well as per his/her individual rehabilitation programme, may be offered the following options for receiving learning information with due consideration of his/her individual psycho-physical needs (e.g., via eLearning studies or distance technologies):

- for persons with impaired vision: enhanced fonts in hard copy documents; e-documents; audio files (transfer of study materials to an audio-format); hard copy documents with the use of Braille; individual consultation with a facilitated communicator; individual assignments and mentoring;

- for persons with hearing impairments: in hard copy; e-documents; video materials with subtitles; individual consultation with a facilitated communicator; individual assignments and mentoring;
- for persons with a muscular-skeleton disorder: in hard copy; e-documents; audio-files, individual assignments and mentoring.