

COURSE DESCRIPTION

General information		
Lead instructor	Assistant Professor Dolores Modic Associate Professor Katarina Krapež Assistant Professor Drago Cmur	
Course name	CDS-08: Intellectual property in the digital society	
Study programme	Computer and Data Science, third cycle Doctoral Study Programme	
Course status	Elective	
Year	First or Second	
Number of credits and mode of delivery	ECTS student workload coefficient	10
	Number of hours (L+P+S)	10/20/270

Course description
<i>1.1. Course goals</i>
<p>Learning unit contributes to the development of the following general competencies:</p> <ul style="list-style-type: none"> - ability to identify a research problem, analyze it, and offer possible solutions. - ability to create new knowledge, which represents a contribution to science - mastery of standard research methods, procedures and processes in diverse scientific fields <p>and subject-specific competencies:</p> <ul style="list-style-type: none"> - ability to design and implement original solutions of given scientific problems - ability to conduct independent scientific work in the area of intellectual property - capability to apply patent informatics methodologist to a given research problem
<i>1.2. Course enrolment requirements</i>
There is none.
<i>1.3. Intended course learning outcomes</i>
<p>Knowledge and understanding:</p> <p>The student:</p> <ul style="list-style-type: none"> - demonstrates knowledge of basic intellectual property concepts and theories - demonstrates the ability of individual and independent research work in the field of intellectual property studies

- demonstrates the ability of presenting the acquired research results in scientific meetings and publications – including being able to write a scientific article on the selected topics at the intellectual property in the digital era
- gains the ability to collect, process and use data connected to intellectual property.

1.4. Course content

GENERAL PART

Intellectual property theories

The Natural Rights Perspective; The Personhood Perspective; Utilitarian/Economic Theories; Innovation Theories; Distributive and Social Justice

Intellectual property rights

Patents (software patents), Trademarks, Designs, Copyrights, Trade secrets, Other rights

Innovation policies and technology transfer

Intellectual Property as a Public Interest

Incentives theories; Economic Theories of Costs and Benefits of Patents; Open innovation

Intellectual property (rights) management in the digital age

Innovation potential of IPR; IP management as a process, Strategizing IP; Patent thicket, patent pools

SPECIAL FOCI

Competition, Intellectual Property and Standard Setting

Standard-essential patents (SEP); SEPs in IT; Standard setting organizations; FRAND terms

Intellectual property and innovation for circular transitions

Patent informatics, blockchain and smart contracts

Measuring innovation; IP and big data; disambiguation and other common problems of patent informatics, new formats (e.g. LOD as a method of publishing structured data using standard web technologies)

1.5. Modes of delivery (mark the appropriate boxes with an X)

- | | |
|-------------------------------------------------|------------------------------------------------------|
| <input checked="" type="checkbox"/> lectures | <input checked="" type="checkbox"/> independent work |
| <input type="checkbox"/> seminars and workshops | <input type="checkbox"/> multimedia and network |
| <input checked="" type="checkbox"/> practicals | <input type="checkbox"/> laboratory |
| <input type="checkbox"/> remote learning | <input type="checkbox"/> supervision |
| <input type="checkbox"/> field work | <input type="checkbox"/> other _____ |

1.6. Student obligations

1.7. Monitoring student work (mark the appropriate boxes with an X)

Class attendance		Participation in class		Seminar paper		Experimental work	
Written exam		Oral exam		Essay		Research	
Project		Continuous assessment of knowledge		Student report		Practical work	

Portfolio		Schoolwork		Homework			
1.8. Assessment and evaluation of student work during classes and the final exam							
Type (examination, oral, coursework, project): - Research paper in the format of a scientific paper, 100%							
1.9. Required readings and number of copies relative to the number of students currently taking the course							
Title				Number of copies		Number of students	
Menell, P. S., Lemley, M. A. & Merges, R. P. (2019). Intellectual Property in the New Technological Age: 2019. Volume 1: Perspectives, Trade Secrets and Patents.							
Modic, D. & Damij, N. (2018). Towards Intellectual Property Rights Management: Back-office and Front-office Perspectives. Springer.							
Sherwood, R. M. (2019). Intellectual property and economic development. Routledge.							
Elkin-Koren, N., & Salzberger, E. (2013). The law and economics of intellectual property in the digital age: the limits of analysis. Routledge.							
1.10. Supplementary readings							
Articles							
<ul style="list-style-type: none"> - Aristodemou, L., & Tietze, F. (2018). The state-of-the-art on Intellectual Property Analytics (IPA): A literature review on artificial intelligence, machine learning and deep learning methods for analysing intellectual property (IP) data. <i>World Patent Information</i>, 55, 37–51. - Baron, J. & Pohlmann, T. (2018). Mapping standards to patents using declarations of standard-essential patents. <i>Journal of Economics & Management Strategy</i>, 27(3), 504–534. - Baron, J., Pohlmann, T. & Blindt K. (2016). Essential patents and standard dynamics. <i>Research Policy</i>, 45, 1762–1773. - Bloom, N., Van Reenen, J., & Williams, H. (2019). A toolkit of policies to promote innovation. <i>Journal of economic perspectives</i>, 33(3), 163–184. - Eppinger, E., Jain, A., Vimalnath, P., Gurtoo, A., Tietze, F., & Chea, R. H. (2021). Sustainability transitions in manufacturing: the role of intellectual property. <i>Current Opinion in Environmental Sustainability</i>, 49, 118–126. - Noh, H., & Lee, S. (2019). Where technology transfer research originated and where it is going: A quantitative analysis of literature published between 1980 and 2015. <i>The Journal of Technology Transfer</i>, 44, 700–740. - Shalaby, W. & Zadrozny, W. (2019). Patent retrieval: a literature review. <i>Knowledge and Information Systems</i>, 1–30. - Fischer, T., & Ringler, P. (2015). The coincidence of patent thickets—A comparative analysis. <i>Technovation</i>, 38, 42–49. 							
Conference papers and reports							

- De la Rosa, J. L., Gibovic, D., Torres, V., Maicher, L., Miralles, F., El-Fakdi, A., & Bikfalvi, A. (2016). On intellectual property in online open innovation for SME by means of blockchain and smart contracts. 3rd Annual World Open Innovation Conf. WOIC.
<https://www.semanticscholar.org/paper/INNOVATION-FOR-SME-BY-MEANS-OF-BLOCKCHAIN-AND-Rosa-Gibovic/e2cd515acf268fc41879e5fc7d0e9be64971836b>
- Modic, D., Johnson, A., Lužar, B., Hafner A., Rožac B., Vučkovič M., & Rasmussen E. (2021). IP LodB project: Final report for EPO Academic Research Programme.
<https://www.epo.org/learning/materials/academic-researchprogramme/research-project-grants.html>.

1.11. Methods of quality monitoring that ensure the acquisition of knowledge, skills and competences.