# Legal Computer Science

## Prof. Alessandro Dario Cortesi

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The IT revolution has determined the shift from the industrial society to the so-called “information society”. In this context, the role of jurists has changed too: in fact, they are now asked to deal with the problems raised by the use of information technology (IT law), and introduce IT tools in their everyday working life (IT in the field of law). The course aims to provide students with the key theoretical and practical tools to interpret these pervasive aspects of modernity. After introducing the main topics of IT law, the course will then focus on a systematic analysis of the European juridical framework of reference, the provisions of national law, and their main interpretations.

At the end of the course, students will be able to:

a) *Knowledge and understanding*. Acquire basic technical-IT skills, and recognise the impact of new technologies on the juridical framework, with a focus on the intersections with civil, labour, industrial, and criminal law.

b) *Ability to apply knowledge and understanding*. Reformulate, from a personal perspective, the concepts and the materials proposed and analysed in class. The critical analysis of the most recent jurisdictional achievements in this field will help students to reach this objective.

c) *Independent judgement*. Use appropriate terminology (also in terms of technical and IT vocabulary) when discussing issues and topics related to IT law, highlighting their complexity. Make assumptions on the legal classification of recently emerging IT phenomena.

d) *Communication skills*. Identify and analyse the key concepts of IT law, using coherent and critical logical-argumentative modules, when needed.

e) *Learning skills*. Analyse the problematic aspects of jurisdictional achievements, and support a specific thesis using the most significant argumentation.

***COURSE CONTENT***

1. *Hardware*, *software*, data. Hints on physical and logical security of data (privacy, integrity and information availability.)
2. Telecommunications: local and geographical networks. Internet and domain names.
3. Expert systems, legimatics, legislative drafting, machine learning, artificial intelligence.
4. Introduction to logics. Computational models.
5. Definition and history of Legal informatics. National and international sources. Which law for the global network? *Soft law* and self-regulation codes.
6. User profiling, jurimetrics, internet of things, *big data*. Basic notions on the right to privacy and data protection.
7. Contracts and IT: a) *Hardware*: *tying contracts, bundling contracts*; planned obsolescence and right to repair; b) *Software*: copyright and patent protection; c) Services: contracts on IT items use. *Outsourcing* and *cloud computing*.
8. Offline and Online Contracts. *E-commerce*, consumer code. *E-procurement*.
9. Contracts with IT or telematic implementation. Payment methods, cryptocurrency, electronic invoice. Blockchain and smart contracts.
10. *Sharing economy*. Notes on “*Uber tax*” and “*web tax*”.
11. Steganography, cryptography, cryptoanalysis, digital signature.
12. Digital public administration, dematerialisation of administrative documents, the Digital Administration Code, e-government and electronic voting. Whistleblowing.
13. Cybercrimes (specifically art. 414, 414-bis; 491-bis, 495-bis, 600-quarter, 600-quater.1, 609-undecies, 609-duodecies, 612-bis, da 615-bis a 615-quinquies, 616, da 617 a 617-septies, da 635-bis a 635-quinquies, 640-ter e 640-quater of the Italian Penal Code). *Hackers* and cyber piracy. *Dark web*, *Deep web*.
14. Remote work. Control of the worker. Platform work.
15. Self-driving vehicles. Aquilian liability. Internet Service Provider liability.
16. Introduction to the online civil administrative and tax trial.
17. *On-line Dispute Resolution*: online arbitration and mediation.
18. IT tests and *Computer/digital forensics*.

***READING LIST***

*Attending students:*

1. Notes and lecture material.
2. A.D. Cortesi (edited by), *ICT e diritto nella società dell’informazione,* Giappichelli, Turin, last edition, only the chapters not covered during lectures (as specified in the notices on lecturer's webpage).
3. Updating essays published on lecturer’s webpage and available on Blackboard platform.
4. We recommend referring to the updated sources available in A.D. Cortesi, *Codice dell’informatica giuridica,* Amazon Kindle Direct Publishing, last edition.

*Non-attending students:*

1. A.D. Cortesi (edited by), *ICT e diritto nella società dell’informazione,* Giappichelli, Turin, 2019.

2. Updating essays published on lecturer’s webpage and available on Blackboard platform~~.~~

3. We recommend referring to the updated sources, available in A.D. Cortesi, *Codice dell’informatica giuridica*, Amazon Kindle Direct Publishing, 2021.

Texts suggested for further study:

F. Pizzetti, *Protezione dei dati personali in Italia tra GDPR e codice novellato*, Giappichelli, Torino, 2021.

G. Finocchiaro, *Diritto di Intenet*, Zanichelli, Bologna, 2021.

G. Pascuzzi, *Il diritto dell’era digitale*, Il Mulino, Bologna, 2020.

L. Floridi, *Pensare l’Infosfera*, Raffaello Cortina Editore, Milano, 2020.

G. Ziccardi – P. Perri, *Tecnologia e diritto*, Giuffrè Francis Lefebvre, Milano, 2019 (3 voll.).

N.B. The exam must always be taken on the syllabus of the most recent academic year. Students enrolled in other academic years, Erasmus students, students who have changed their course of study or transfered from other universities, are requested to send an e-mail to the lecturer in order to plan how to prepare the examination.

***TEACHING METHOD***

The main theoretical topics of the course will be taught through frontal lectures. In-depth study material will be announced in class. The course will give particular importance to the analysis and discussion of the topics proposed in class: the aim is to develop students’ skills in adopting a critical approach towards the issues discussed during the lectures.

Exercises on PC (optional) will focus on research on national and international normative and legal sources, through advanced queries (implementing Boolean operators) of the main data banks; document cryptation with asymmetric key; use of the *consolle* for online civil trial; advanced functions for word processing (mail merge, revisions, indexes); advanced functions for spreadsheets (filter, nested IF function, confirming data). *The exam mark will take into consideration the practical skills gained during the exercises;* app of artificial intelligence (ChatGPT, Claude).

In support of the exercisesthe text A.D. Cortesi (edited by), *Lezioni pratiche di informatica per giuristi*, Amazon Kindle Direct Publishing, last edition, is available.

***ASSESSMENT METHOD AND CRITERIA***

The assessment method is based on the following criteria:

1. The ones indicated in this assessment grid: knowledge of course content, use of appropriate methodology and terminology, ability to identify the critical aspects of the issues discussed in class, and development of critical and logic skills. There will not be any ongoing assessment during the course.
2. In the light of the grid explained above, at the end of the course there will be an oral exam based on the topics and the texts explained in class. In particular, the assessment criteria will be organised as follows:

Students with a clear understanding of the topics and the issues analysed during the course, an accurate philosophical-juridical methodology, and who can reformulate, from a critical perspective, the topics under analysis will obtain an excellent mark.

Students with a good knowledge of the subject, supported by acceptable but incomplete and partially imprecise methodological, logical, and liguistic skills will obtain a discrete mark.

Students with a minimal knowledge of the subject, and inadequate critical-methodological and linguistic-argumentative skills will obtain a low but sufficient mark.

Students with a defective knowledge of the subject, and a lack of adequate technical-juridical terminology will not pass the exam.

The final mark will be expressed in thirtieths.

In addition, students attending practical classes (that are optional) will increase the final mark of 1 point (good) or 2 points (excellent).

***NOTES AND PREREQUISITES***

Students who are interested in writing their dissertation on a subject of this course are highly advised to attend frontal lectures. Attendance of exercises is also recommended to gain practical skills (of specific legal interest) in order to better complete the course.

Further information can be found on the lecturer's webpage at <http://docenti.unicatt.it/web/searchByName.do?language=ENG>, or on the Faculty notice board.