



IDENTIFYING DATA

Principles and Law in Cybersecurity

Subject	Principles and Law in Cybersecurity			
Code	V05M175V01201			
Study programme	Máster Universitario en Ciberseguridad			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Mandatory	1st	2nd
Teaching language	Spanish Galician English			
Department				
Coordinator	Rodríguez Vázquez, Virgilio			
Lecturers	Faraldo Cabana, Patricia Rodríguez Vázquez, Virgilio			
E-mail	virxilio@uvigo.es			
Web	http://moovi.uvigo.gal/			
General description	This subject will address the rules relating to cybersecurity. A criminological study of the main computing crimes will be carried out. The central block consists of a systematic review of the regulation of the computing crimes contained in the Spanish Criminal Code. Analysis will also be made of the case law existing in this subject.			

Skills

Code	
A3	Students will be able to integrate diverse knowledge areas, and address the complexity of making statements on the basis of information which, notwithstanding incomplete or limited, may include thoughts about the ethical and social responsibilities entailed to the application of their professional capabilities and judgements.
C3	Knowledge of the legal and technical standards used in cybersecurity, their implications in systems design, in the use of security tools and in the protection of information.
C8	Skills for conceive, design, deploy and operate cybersecurity systems.
D1	Ability to apprehend the meaning and implications of the gender perspective in the different areas of knowledge and in the professional exercise, with the aim of attaining a fairer and more egalitarian society.
D5	Ability for oral and written communication in English.

Learning outcomes

Expected results from this subject	Training and Learning Results
Students will be able to integrate diverse knowledge areas, and address the complexity of making statements on the basis of information which, notwithstanding incomplete or limited, may include thoughts about the ethical and social responsibilities entailed to the application of their professional capabilities and judgements.	A3
Knowledge of the legal and technical standards used in cybersecurity, their implications in systems design, in the use of security tools and in the protection of information.	C3
Skills for conceive, design, deploy and operate cybersecurity systems.	C8
Ability to apprehend the meaning and implications of the gender perspective in the different areas of knowledge and in the professional exercise, with the aim of attaining a fairer and more egalitarian society.	D1
Ability for oral and written communication in English.	D5

Contents

Topic	
-------	--

1. Introduction to the law on cybersecurity. Review of the rules on computer and risk management.	<p>1.1. EU regulations.</p> <p>1.2. The Law of National Security: the strategy of national security and the diagram of national security.</p> <p>1.3. Regulation (EU) 2016/679 of 27 April 2016, General Data Protection Regulation. The Organic Law of Data Protection and the developmental Regulation. Regulation (EU) 2022/868 of the European Parliament and of the council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act).</p> <p>1.4. Computing crimes in the Criminal Code.</p>
2. Criminological approach to computing.	<p>2.1. Statistical sources: main national and international organisms, crimes.</p> <p>2.2. Analysis of the main reports on cybersecurity.</p> <p>2.3. Identification of the main technological resources used.</p>
3. Cybersecurity breaches through criminal conduct.	<p>3.1. Definition: computing crimes and cybercrime.</p> <p>3.2. The use of ICT to commit crimes and when ICT is the goal of the crime.</p> <p>3.3. The Spanish Criminal Code, LO 10/1995, of 23 November, European Directive 2013/40/UE of the European Parliament and of the Council, of 12 August 2013, on attacks against information systems, Agreement on cybersecurity or Agreement of Budapest, of the Council of Europe, of 23 November 2001.</p>
4. The main crimes that affect cybersecurity.	<p>4.1. Crimes of discovering and disclosing secrets (I). Frequent risks: ransomware and the theft of information.</p> <p>4.2. Crimes of discovering and disclosing secrets (II). Access and interception. The access to files or computer, electronic or telematic media. Special attention to the manager of the files or media. The interception of transmissions of computing data. The use of malware (virus, spyware...).</p> <p>4.3. Crimes of discovering and disclosing of secrets (III). Producing, purchasing, importing or facilitating programs to commit the crimes listed above, or computer passwords or access codes.</p> <p>4.4. Crimes against privacy and an individual's right to their own image: the undue use of cookies.</p> <p>4.5. Crimes against property (I). Scams committed via computer. Producing, possessing or facilitating computer programs used for this purpose.</p> <p>4.6. Crimes against property (II). Fraud using a third-party telecommunication signal. Use of telecommunication terminal without the owner's consent.</p> <p>4.7. Crimes against property (III). Damages to computing data, computing programs or electronic documents. Damages to computing systems. Damages to computing systems of a critical infrastructure (brief reference to the operators of critical infrastructure, to the operator's security plans and to the of specific protection plans). Hindering or interrupting the functioning of a third-party computing system. Manufacturing, possessing or facilitating to third parties computing programs to be used for this purpose. Special reference to the criminal liability of legal persons.</p> <p>4.8. Crimes against intellectual and industrial property. Through the provision of information society services or through an Internet access portal.</p> <p>4.9. Crimes relating to the market and to consumers. Discovering company secrets through the use of ICT. Intelligible access to a radio or television broadcast, to remote interactive services via electronic channels.</p> <p>4.10. Crimes against public faith: electronic lies.</p>
5. Crimes committed against persons using communication techniques.	<p>5.1. Crimes against freedom. Threats using social networks or other ICT. Cyber stalking.</p> <p>5.2. Crimes against the sexual freedom and indemnity. Child grooming and child pornography.</p> <p>5.3. Crimes against intimacy and privacy.</p> <p>5.4. Crimes against honour. Harming a person's digital reputation.</p>
6. Cyberterrorism.	<p>6.1. Concept.</p> <p>6.2. Computing crimes carried out with the specific purpose of art. 573 of the Criminal Code.</p> <p>6.3. Crime of collaborating with a terrorist group or organisation through the provision of technological services.</p>
7. Crimes relating to national Defence and others. Brief approximation.	

8. Analysis of Spanish caselaw in relation to computing crimes.

8.1. Special attention to the caselaw of the Supreme court.
 8.2. Agreements of the non-jurisdictional plenary of the Second Chamber of the Supreme Court relating to computing crimes.
 8.3. The Prosecution Service and the Prosecutor's Office specialising in computer criminality.

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	13	32	45
Laboratory practical	5	22	27
Objective questions exam	2	0	2
Problem and/or exercise solving	1	0	1

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Lecturing	Presentation by the teacher of the contents of the subject under study, theoretical and / or guidelines for the work, exercise or project to be developed by the student.
Laboratory practical	Activities to apply knowledge to specific situations and basic skills acquisition and procedures related to the matter to be studied. Special areas are developed with specialized equipment (scientific and technical laboratories, computer rooms, etc.).

Personalized assistance

Methodologies	Description
Lecturing	The students will have lectures as shown on the timetable published on the website for the Master's Degree. It will be able to attend, previous appointment -by email-, or well through email or well through virtual dispatch in the remote campus.
Laboratory practical	The students will have lectures as shown on the timetable published on the website for the Master's Degree. It will be able to attend, previous appointment -by email-, or well through email or well through virtual dispatch in the remote campus.

Assessment

	Description	Qualification	Training and Learning Results
Objective questions exam	<p>The continuous assessment system will consist of three written exams. First two will focus on partial objective tests (objective questions exam, multiple choice, referred to in this part of the Guide), and the third will focus on problem solving (referred to in the following part of the guide).</p> <p>The multiple choice objective questions exam:</p> <ul style="list-style-type: none"> - will be held throughout the course, during the lecture timetable.. The timetable for the different intermediate assessment tests will be approved by the Comisión Académica de Máster Interuniversitario (CAMI) and will be available at the beginning of each academic term. - each examination will comprise the part of the program that is indicated at the start of the term by the subject coordinator. - they will consist of a multiple choice test, with 0 to 2.5 points for each of them. Correct answers will be worth 0.1 and 0.05 will be deducted for each incorrect answer. Answers left blank will not score anything. - Both exams together will be worth 50% of the final mark, with the remaining 50% corresponding to the problem solving (described in the following section). <p>To pass the subject under the continuous assessment system the mark from the three exams, based on the weighting above, needs to be equal to or greater than 5. Those who attend the first partial test (the first multiple choice objective questions exam), thereby expressing their interest in being included in the continuous assessment system, will be assessed according to the criteria stated above and will not be entitled to be assessed by the final exam system that corresponds to 100% of the marks for the subject. Therefore, if a student takes the first partial exam, it is not possible to abandon the continuous assessment system. If a student takes the first partial exam and then does not take the next partial exam(s), he/she will score 0 points for this/these exam(s).</p>	50	A3 C3 D1 C8

Problem and/or exercise solving	<p>The continuous assessment system will consist of three written examinations: the first two will focus on partial objective tests (objective questions exam, multiple choice, referred to in the previous part of the guide exercise, and the third will focus on problem solving (referred to in this part of the guide).</p> <p>The examination corresponds to problem solving:</p> <ul style="list-style-type: none"> - it will be held on the official date of the ordinary announcement of the final exam: first opportunity, according to the official schedule approved by the Academic Commission of the Master's Degree for the 2022-2023 academic year - It will consist of solving one or several practical cases and will be marked with a score of 0 to 5 points - The problems posed by the practical cases may affect the issues covered in the course syllabus. - It will be worth 50% of the final mark, with the remaining 50% corresponding to the two multiple choice objective questions exams. <p>To pass the subject under the continuous assessment system, the mark from the three exams, based on the weighting above, needs to be equal to or greater than 5. Those who attend the first partial test (the first multiple choice objective questions exam), thereby expressing their interest in being included in the continuous assessment system, will be assessed according to the criteria stated above and will not be entitled to be assessed by the final exam system that corresponds to 100% of the marks for the subject. Therefore, if a student takes the first partial exam, it is not possible to abandon the continuous assessment system. If a student takes the first partial exam and then does not take the next partial exam(s), he/she will score 0 points for this/these exam(s).</p>	50	A3 C3 D1 C8 D5
---------------------------------	---	----	-------------------

Other comments on the Evaluation

1. FIRST OPPORTUNITY

a) CONTINUOUS ASSESSMENT SYSTEM described in the sections above.

b) FINAL EXAM SYSTEM

For those who do not choose the continuous assessment system, the subject assessment will consist of a single final exam, on the date established in the official schedule approved by the Academic Commission of the Master's Degree for the 2022-2023 academic year.

The exam will cover the whole syllabus and will be worth 100% of the mark for the subject. It will consist of two parts, a theory part and a practical part, which will both be worth 0 to 5 points each. The theory part will consist of a multiple choice test, in which correct answers will be worth twice as much as the points deducted for incorrect answers. Any answers left blank will not score anything. The practical part will consist of solving one or several practical cases. The final mark for the exam will be obtained by adding together the marks obtained in each of the parts. To pass the subject students must obtain a minimum of 5 points after adding the marks from both parts together.

2. SECOND OPPORTUNITY AND EXTRAORDINARY EXAM

The subject assessment will consist of a single final exam, on the date established in the official schedule approved by the Academic Commission of the Master's Degree for the 2022-2023 academic year.

The exam will cover the whole syllabus and will be worth 100% of the mark for the subject. It will consist of two parts, a theory part and a practical part, which will both be worth 0 to 5 points each. The theory part will consist of a multiple choice test, in which correct answers will be worth twice as much as the points subtracted for incorrect answers. Any answers left blank will not score anything. The practical part will consist of solving one or several practical cases. The final mark for the exam will be obtained by adding together the marks obtained in each of the parts. To pass the subject students must obtain a minimum of 5 points after adding the marks from both parts together.

Sources of information

Basic Bibliography

DE LA CUESTA ARZAMANDI, José Luis (dir.), **Derecho penal informático**, 1.ª, Civitas, 2010

LUZÓN PEÑA, Diego-Manuel (dir.), **Código Penal**, 5.ª, Reus, 2017

Complementary Bibliography

BARONA VILAR, Silvia, **Justicia civil y penal en la era global**, 1.ª, Tirant lo Blanch, 2017

BARRIO ANDRÉS, Moisés, **Ciberdelitos : amenazas criminales del ciberespacio : adaptado reforma Código Penal 2015**, 1.ª, Reus, 2017

CRESPO SANCHÍS, Carolina (coord.), **Fraude electrónico : panorámica actual y medios jurídicos para combatirlo**, 1.ª, Civitas, 2013

- CRUZ DE PABLO, José Antonio, **Derecho penal y nuevas tecnologías : aspectos sustantivos : adaptado a la reforma operada en el Código penal por la Ley orgánica 15-2003 de 25 de noviembre, especial referencia al artículo 286 CP**, 1.ª, Difusión Jurídica y Temas de actualidad, 2006
- CUERDA ARNAU, María Luisa (coord.), **Menores y redes sociales : cyberbullying, cyberstalking, cibergrooming, pornografía, sexting, radicalización y otras formas de violencia en la red**, 1.ª, Tirant lo Blanch, 2016
- DAVARA RODRÍGUEZ, Miguel Ángel, **Manual de derecho informático**, 11.ª, Thomson-Aranzadi, 2015
- DE NOVA LABIÁN, Alberto José, **Delitos contra la propiedad intelectual en el ámbito de Internet : especial referencia a los sistemas de intercambio de archivos**, 1.ª, Dykinson, 2010
- DE URBANO CASTRILLO, Eduardo et al., **Delincuencia informática : tiempos de cautela y amparo**, 1.ª, Aranzadi, 2012
- FARALDO CABANA, Patricia, **Las Nuevas tecnologías en los delitos contra el patrimonio y el orden socioeconómico**, 1.ª, Tirant lo Blanch, 2009
- FERNÁNDEZ TERUELO, Javier Gustavo, **Ciberdelitos, los delitos cometidos a través de Internet : estafas, distribución de pornografía infantil, atentados contra la propiedad intelectual, daños informáticos, delitos contra la intimidad y otros**, 1.ª, Constitutio Criminalis Carolina, 2017
- FLORES PRADA, Ignacio, **Criminalidad informática : (aspectos sustantivos y procesales)**, 1.ª, Tirant lo Blanch, 2012
- GALÁN MUÑOZ, Alfonso, **El Fraude y la estafa mediante sistemas informáticos : análisis del artículo 248.2 C.P.**, 1.ª, Tirant lo Blanch, 2005
- GIANT, Nikki, **Ciberseguridad para la i-generación : usos y riesgos de las redes sociales y sus aplicaciones**, 1.ª, Narcea, 2016
- GÓMEZ RIVERO, M.ª del Carmen (dir.), **Nociones fundamentales de Derecho penal. Parte especial. Volumen I**, 2.ª, Tecnos, 2015
- GÓMEZ RIVERO, M.ª del Carmen (dir.), **Nociones fundamentales de Derecho penal. Parte especial. Volumen II**, 2.ª, Tecnos, 2015
- GÓMEZ TOMILLO, Manuel, **Responsabilidad penal y civil por delitos cometidos a través de Internet : especial consideración del caso de los proveedores de contenidos, servicios, acceso y enlaces**, 2.ª, Thomson-Aranzadi, 2006
- GONZÁLEZ CUSSAC, José Luis (coord.), **Derecho penal. Parte especial**, 5.ª, Tirant lo Blanch, 2016
- GONZÁLEZ CUSSAC, José Luis/CUERDA ARNAU, M.ª Luisa (dirs.), **Nuevas amenazas a la seguridad nacional : terrorismo, criminalidad organizada y tecnologías de la información y la comunicación**, 1.ª, Tirant lo Blanch, 2013
- GOODMAN, Marc, **Future crimes : inside the digital underground and the battle for our connected world**, 1.ª, Pegasus Books, 2016
- HILGENDORF, Eric, **Computer- und Internetstrafrecht : ein Grundriss**, 1.ª, Springer, 2005
- Instituto Español de Estudios Estratégicos, Grupo de Trabajo número 03/10, **Ciberseguridad : retos y amenazas a la seguridad nacional en el ciberespacio**, 1.ª, Ministerio de Defensa, Dirección General de Relacións, 2011
- LUZÓN PEÑA, Diego-Manuel, **Lecciones de Derecho penal. Parte general**, 3.ª, Tirant lo Blanch, 2016
- MARZILLI, Alan, **The Internet and crime**, 1.ª, Chelsea House, 2010
- MATA Y MARTÍN, Ricardo M., **Estafa convencional, estafa informática y robo en el ámbito de los medios electrónicos de pago : el uso fraudulento de tarjetas y otros instrumentos de pago**, 1.ª, Thomson-Aranzadi, 2007
- MORÓN LERMA, Esther, **Internet y derecho penal : "hacking" y otras conductas ilícitas en la red**, 2.ª, Aranzadi, 2002
- MUÑOZ CONDE, Francisco/GARCÍA ARÁN, Mercedes, **Derecho penal. Parte general**, 9.ª, Tirant lo Blanch, 2015
- ORENES, Eduardo, **Ciberseguridad familiar : cyberbullying, hacking y otros peligros en Internet**, 1.ª, Círculo Rojo, 2013
- ORTS BERENGUER, Enrique/ROIG TORRES, Margarita, **Delitos informáticos y delitos comunes cometidos a través de la informática**, 1.ª, Tirant lo Blanch, 2001
- QUERALT JIMÉNEZ, Joan Josep, **Derecho penal español. Parte especial**, 7.ª, Tirant lo Blanch, 2015
- QUINTERO OLIVARES, Gonzalo (dir.), **Comentarios a la Parte especial del Derecho penal**, 10.ª, Aranzadi, 2016
- RALLO LOMBARTE, Artemi, **El derecho al olvido en Internet : Google**, 1.ª, Centro de Estudios Políticos y Constitucionales, 2014
- RODRÍGUEZ MESA, M.ª José, **Los delitos de daños**, 1.ª, Tirant lo Blanch, 2017
- ROMEO CASABONA, Carlos M.ª (coord.), **El Ciberdelito : nuevos retos jurídico-penales, nuevas respuestas político-criminales**, 1.ª, Comares, 2006
- RUEDA MARTÍN, M.ª Ángeles, **Protección penal de la intimidad personal e informática : (los delitos de descubrimiento y revelación de secretos de los artículos 197 y 198 del Código penal)**, 1.ª, Atelier, 2004
- SAIN, Gustavo, **Delitos informáticos : investigación criminal, marco legal y peritaje**, 1.ª, B de f, 2017
- SÁINZ PEÑA, Rosa M.ª (coord.), **Ciberseguridad, la protección de la información en un mundo digital**, 1.ª, Fundación Telefónica, Ariel, 2016
- SEGURA SERRANO, Antonio/GORDO GARCÍA, Fernando (coords.), **Ciberseguridad global : oportunidades y compromisos en el uso del ciberespacio**, 1.ª, Universidad de Granada, 2013
- SILVA SÁNCHEZ, Jesús María (dir.)/RAGÜÉS I VALLÉS, Ramón (coord.), **Lecciones de Derecho penal: Parte especial**, 5.ª, Atelier, 2018
- SINGER, Peter Warren, **Cybersecurity and cyberwar : what everyone needs to know**, 1.ª, Oxford University Press, 2014
- TOURÍÑO, Alejandro, **El derecho al olvido y a la intimidad en Internet**, 1.ª, Los Libros de la Catarata, 2014
- VALLS PRIETO, Javier, **Problemas jurídico penales asociados a las nuevas técnicas de prevención y persecución del crimen mediante inteligencia artificial**, 1.ª, Dykinson, 2017

VELASCO NÚÑEZ, Eloy (dir.), **Delitos contra y a través de las nuevas tecnologías : ¿cómo reducir su impunidad?**, 1.ª, Consejo General del Poder Judicial,Centro de Docu, 2006

VELASCOS SAN MARTÍN, Cristos, **La jurisdicción y competencia sobre delitos cometidos a través de sistemas de cómputo e internet**, 1.ª, Tirant lo Blanch, 2012

WALDEN, Ian, **Computer crimes and digital investigations**, 1.ª, Oxford University Press, 2007

Recommendations

Subjects that it is recommended to have taken before

Management of Information Security/V05M175V01101
