UAB
Universitat Autònoma de Barcelona

Practicum IV

Code: 104690
ECTS Credits: 6

2024/2025

Degree	Type	Year
2502501 Prevention and Integral Safety and Security	OB	3

Contact

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Teachers

Simon Ramos Manjarin

Teaching groups languages

You can view this information at the end of this document.

Prerequisites

This subject does not have any prerequierments

Objectives and Contextualisation

The training objectives that are intended to achieve in the subject are the following:

- Introduce the student in the general aspects of integral security applied to the logistics and transport infrastructures, taking as an example the transport by rail.
- Make the student aware of the regulations regarding civil protection, fire protection and self-protection.
- Present the student with technical criteria and methodologies for the identification, analysis and evaluation of emergency risks.
- Preparation by the student of a Self-protection Plan project of a logistics and transport infrastructure in application of current regulations in Spain and autonomous communities.
- Acquire knowledge in the use of AUTOCAD to be able to manipulate a plan of the architecture of a logistics and transport infrastructure and create the plans required by the regulations.
- Acquire basic knowledge of traffic safety in rail transport.
- Introduce the students in the aspects of patrimonial security and citizen security in the logistical and transport infrastructures.
- Acquire knowledge in the use of MS Project to be able to plan and budget the development of a project.
- Acquire skills for the exhibition and defense of the project

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Competences

- Act with ethical responsibility and respect for fundamental rights and duties, diversity and democratic values.
- Carry out analyses of preventative measures in the area of security.
- Carry out scientific thinking and critical reasoning in matters of preventions and security.
- Efficiently manage human resources.
- Evaluate the technical, social and legal impact of new scientific discoveries and new technological developments.
- Generate innovative and competitive proposals in research and in professional activity developing curiosity and creativity.
- Identify the resources necessary to respond to management needs for prevention and integral security.
- Make changes to methods and processes in the area of knowledge in order to provide innovative responses to society's needs and demands.
- Plan and coordinate the resources of the three large subsystems that interact in questions of security: people, technology and infrastructures.
- Respond to problems applying knowledge to practice.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
- Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
- Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
- Take account of social, economic and environmental impacts when operating within one's own area of knowledge.
- Take sex- or gender-based inequalities into consideration when operating within one's own area of knowledge.
- Use the capacity for analysis and synthesis to solve problems.
- Work and learn autonomously.

Learning Outcomes

1. Analyse the situation and identify the points that are best.
2. Carry out scientific thinking and critical reasoning in matters of preventions and security.
3. Coordinate the resources of the three main subsystems of the prevention and integral security sector: people, technology and infrastructures.
4. Critically analyse the principles, values and procedures that govern professional practice.
5. Design a project applied to integral security and prevention in an organisation.
6. Design and implement recovery plans following disasters and mechanisms for contingencies.
7. Evaluate the technical, social and legal impact of new scientific discoveries and new technological developments.
8. Generate innovative and competitive proposals in research and in professional activity developing curiosity and creativity.
9. Identify the infrastructure, technology and resources necessary to respond to operations in prevention and integral security.
10. Propose new methods or well-founded alternative solutions.
11. Propose projects and actions in accordance with the principles of ethical responsibility and respect for fundamental rights and responsiblities, diversity and values democráticos.
12. Propose projects and actions that incorporate the gender perspective.
13. Propose viable projects and actions that promote social, economic and environmental benefits.
14. Respond to problems applying knowledge to practice.
15. Select the minimum resources for efficient risk management.

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16. Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
17. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
18. Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.
19. Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.
20. Students must have and understand knowledge of an area of study built on the basis of general secondary education, and while it relies on some advanced textbooks it also includes some aspects coming from the forefront of its field of study.
21. Use the capacity for analysis and synthesis to solve problems.
22. Work and learn autonomously.

Content

Contents of the theoretical sessions

- Global vision of the subject
- Introduction to the legal framework: Reference regulation
- Structure of the Project Structure of the self-protection plan. Comparison of current legislation
- Basic notions of the railway model I: Railway manager - Operator. Management and Infrastructure Centers
- Basic notions of the railway model II: Operators' Management Centers. Basic concepts AUTOCAD.
- DOCUMENT 1: Identification of the installation. Inventory, analysis and risk assessment. Evaluation of the evacuation. Confinement evaluation Plans
- DOCUMENT 2: Inventory and description of the material means and self-protection measures. Sectorization Human resources. Corrective measures of risk. Blueprints
- DOCUMENT 3: Action manual. Object. Identification of emergencies.
- DOCUMENT 3: Emergency equipment. Actions to be taken during the emergency.
- DOCUMENT 3: Action sheets. Integration in higher-level plans.
- DOCUMENT 4: Implementation, maintenance and update. Training and information. Drills Annexes. Directories, Models, Plans and Cards. Preparation and realization of a simulation.
- Time Management MS Project. Cost management
- Security in the circulation. Introduction to railway systems and subsystems. Subsystems infrastructure. Command and control subsystems.
- Patrimonial Security: Organization of services. Operating procedures.

Contents of practical sessions

- PRACTICE 1. Competence in AUTOCAD.
- PRACTICE 2. Preparation of Document 1
- PRACTICE 3. Preparation of Document 2
- PRACTICE 4. Preparation of Document 3/4
- PRACTICE 5. Competence in MS Project-Development of communication skills

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Class	40	1.6	

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Evaluation	4	0.16
Type: Supervised		
Continuous evaluation assestments	12	0.48
Type: Autonomous		
Independent study	94	3.76

Teaching language: Spanish

The theoretical classes in the classroom will combine the master classes, which will take up most of the time, and the development of examples. The practical lessons in the classroom, divided into two groups, will consist of the practical application of theoretical knowledge with the use of methodologies of evaluation, analysis of risks, and applications such as Auto CAD, as well as its application in the development of project chosen by each student. The autonomous activities will correspond to the personal study, as well as the resolution of the exercises raised by the teacher, as well as the elaboration of the project based on the contents of the subject. Each student will have to look up documentation related to the project. Students will exercise their communication skills and the knowledge of the project by means of the exposition and defending in a brief and summary way the project developed by the rest of classmates and the teachers' court.
•Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

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Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Assestment of the oral presentation	20%	0	0	1, 3, 5, 6, 9, 10, 15, 16, 17, 18, 19, 20
Assestment of the project	40%	0	0	1, 2, 3, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22
Exam	20%	0	0	3, 5, 6, 9, 15, 16, 17, 18, 19, 20
Individual assestment of the work	10%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22
Practical exercices	10%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22

The assessment parameters of each one of the aspects considered in the evaluation are the following:

1. Individual Theoretical Exam

The student will have to pass a theoretical examination in order to evaluate the individual knowledge of the basic principles and the contents of the subject, and will be done on the contents explained in class until the time of the test.

The exam will consist of two parts:

PART 1: Test of 10 questions with a correct answer of 4 possible answers.

The criteria for the assessment of the answers will be the following:

1 correct answer: 1 point

1 incorrect answer: - 0,33

Unanswered questions will be evaluated with a 0.

The overall results of the test will correspond to the sum of the assessment of each question. In the case of negative global assessments of the test, they will be rated 0.

PART 2: 5 written answer questions.

Each response will be qualified in a value between 0.0 and 2.0 depending on the content respond to the question posed and the degree of excellence of the response.

The overall results of the test will correspond to the sum of the assessment of each question. In the case of negative global assessments of the test, they will be rated 0.

The overall qualification of the exam will be carried out by the arithmetic mean of the two parts and will be a value of a maximum of 10 points.

2. Individual assessment of the work by the tutor

The tutors of the subject, will assess individually the overall work of each student taking into account the following aspects:

- Participation in class.

- Interest and inquiries for continuous improvement.

- Evolution of the content of the submitted project.

- Respectful attitude towards the development of the class.

- Contributions to the objective of the subject, beyond those strictly proposed.

The qualification of the individual assessment of the work by the tutor will be a value of a maximum of 10.0 points.

3. Individual practice exercises

The student will have to deliver by means of tasks in the moodel classroom the practical exercises that professors create and 2 partial deliveries of the project before the final delivery.

The overall assessment of the set of individual exercises and the partial deliveries of the project will be carried out on a maximum value of 10.0 and a minimum of 0.0.

It will be necessary for the student to deliver, respecting the established deadlines, of all the exercises and partial project deliveries raised so that they can choose to achieve a minimum score of 5 points.

On the other hand, the quality in the elaboration of the exercises (complete content and appropriate to the proposed task in the established terms) will be assessed.

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The overall qualification of the individual exercises will be worth about a maximum of 10 points.

4. Evaluation of the submitted project

The students must present in groups of 4 people maximum, a project of security and prevention in logistical and transport infrastructures according to the parameters established in the subject.

The parameters that determine the content of the project are:

- A project will be presented indicating the link with the prevention and securityand the special focus given by the railway transport networks to the knowledge acquired to date in the degree.
- The project will focus on the development and implementation of a Self-Protection Plan in a logistics and transport infrastructure, taking as a model, developed in class, the railway field, and more specifically one of the following cases: An underground transport station Travelers, a Logistic Center for Goods Transport by Rail or a Railway Tunnel
- The project will contemplate the planning of the time and resources necessary for its development and implementation.
- The delivery of the project will be done in 2 files. The project document will be delivered in a single file (preferably pdf) and on the other hand the plan attachment will be delivered in a Auto CAD file.

The qualification of the submitted project will be a minimum value of 0.0 on a maximum of 10.0 points, taking into account that:

You can only get scores of 5.0 points if:

- The content of the Project is complete (there are no sections left, or these respond to the content they indicate)
- The maps are attached in the AutoCAD file and the rest of the document in Word or PDF file.

In order to evaluate the project presented, it will be taken into account:

- Spelling and written formal expression.

- The clarity of the contents and the cleanliness of the presentation.

- The complete existence of all the contents requested in the subject.

- Adaptation of the contents to the methodologies and work procedures used in the subject.

- Adaptation of the contents of the project to the case addressed by the student.

- The contribution of new visions or approaches not treated in class but appropriate for the case worked and the benefits it requires.

5. Evaluation of the exhibition and defense of the Project

The students will have to carry out the exercise by groups to exhibit and to defend the project realized before

The qualification of the exhibition and defense of the Project will be a minimum value of 0.0 on a maximum of 10.0 points.

In order to evaluate the exhibition and defense, it will be taken into account some groupal aspects:

- Audiovisual media used
- Representative and significant exposed contents of the entire project

Some individual aspects will be be taken into account as well:

- Control over exposure time
- Communication skills (clarity in explanations, mastery of the exposed content, support in audiovisual media ..)

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GLOBAL ASSESSMENT OF THE SUBJECT

The global evaluation of the subject will be made by means of the weighted sum of the different aspects evaluated according to the percentages indicated at the beginning of point VIII and will be a value between 0.0 and 10.0 points valued as indicated the UAB Academic Regulations:

From	To	Qualitative
NP	NP	"No presentado"
0,0	4,9	"Suspenso"
5,0	6,9	"Aprobado"
7,0	8,9	"Notable"
9,0	10,0	"Excelente"
9,0	10,0	"Matrícula de Honor"

The calculation will respond to the following formula according to the numbering indicated at the beginning of the point

CONTINOUS ASSESTMENT: (3. X 0.10)+ (4. X 0.40)+ (5. X 0.20)

GRADE OF THE SUBJECT = (1. X 0.20)+ (2. X 0.10)+ (3. X 0.10)+ (4. X 0.40)+ (5. X 0.20)

IT WILL BE ESSENTIAL TO HAVE COMPLETED THE THEORETICAL EXAMINATION TO BE ABLE TO APPLY THE SUBJECT ASSESSMENT CALCULATION. IN THE EVENT THAT IT IS NOT SO, IT MAY BE RE-ASSESSED, GETTING A MAXIMUM RATING OF 5 OF THIS TEST.

UNIQUE EVALUATION SYSTEM IN NOT CONSIDERED FOR THIS SUBJECT

RECOVERY OF THE SUBJECT

According to article 112 ter. 2 of the UAB Academic Regulations, to participate in the recovery, students must have previously been evaluated in a set of activities, the weight of which is equivalent to a minimum of two-thirds of the total grade for the course.

In case of not passing the theoretical exam of the subject, this may be reevaluated obtaining a maximum grade of 5 for this test.

In addition to the exam, if any of the other assessment tests are nottaken or the grade of 5 is not passed, the continuous assessment will be passed to the final assessment. In other words, 100% of the grade will be that of the final evaluation tests in July. Passing these final tests carries a maximum score of 5 on the record.

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The student who does not pass the subject in the first instance will have the right to reevaluate those aspects of the assessment system that can be improved in order to pass the subject.

The improvable aspects that may be reevaluated are:

1. Individual Theoretical Exam

4. Individual assessment of the work by the tutor

5. Evaluation of the submitted project

6. Evaluation of the exhibition and defense of the project

The evaluation system will follow the same principles indicated above

Without prejudice to other disciplinary measures deemed appropriate, and in accordance with current academic regulations, irregularities committed by a student that may lead to a change in the grade will be rated zero (0). For example, plagiarizing, copying, letting copy ..., an evaluation activity will involve suspending this evaluation activity with a zero (0). Assessment activities classified in this way and by this procedure will not be recoverable. If it is necessary to pass any of these assessment activities to pass the course, this course will be suspended directly, with no opportunity to recover it in the same course.

Bibliography

NORMATIVA

- *Real Decreto 314/2006 de 17 de marzo, por el que se aprueba el Código Técnico de la Edificación.*

http://www.codigotecnico.org/web/

- *Real Decreto 393/2007 Norma Básica de Autoprotección*

www.boe.es/boe/dias/2007/03/24/pdfs/A12841-12850.pdf

- *Ley 2/1985 de Protección Civil*
- *Ley 17/2015, de 9 de julio, del Sistema Nacional de Protección Civil*

http://www.proteccioncivil.org/es/DGPCE/legisla/le_021985.htm

- *Real Decreto 842/2002 Reglamento Electrotécnico de Baja Tensión REBT (Ministerio de Industria Energía y Turismo)*

http://www.f2i2.net/legislacionseguridadindustrial/legislacionNacionalGrupo.aspx?idregl=76

- *Real Decreto 2267/2004 Reglamento de Seguridad Contra Incendios en Establecimientos Industriales RSCIEI (Ministerio de Industria Energía y Turismo)*

http://www.f2i2.net/legislacionseguridadindustrial/legislacionNacionalGrupo.aspx?idregl=49

- *Real Decreto 513/2017, de 22 de mayo, por el quese aprueba el Reglamento de instalaciones de protección contra incendios*

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http://www.boe.es/diario_boe/txt.php?id=BOE-A-2017-6606

- Order TMA/135/2023, of February 15, approving the railway instruction for the project and construction of the infrastructure subsystem (IFI)

http://www.boe.es/eli/es/o/2023/02/15/tma135

PROTECCION CIVIL.

- *Web de Protección Civil del Ministerio del Interior*

http://www.proteccioncivil.org

PLANES DE AUTOPROTECCIÓN.

- *Capacitación para la planificación de la autoprotección en el ámbito de Catalunya*

Material de apoyo. ISPC "Institut de Seguretat Publica de Catalunya"

http://ispc.gencat.cat/ca/1_linstitut/08_publicacions/totes_les_publicacions/

- *Emergencias: aplicaciones básicas para la elaboración de un manual de autoprotección 2º edición*

Enrique Alejandro Contellez Díaz

Ed. Marcombo

ISBN 978 84 267 1606 4

- *Guías para la elaboración de Planes de Autoprotección*

http://interior.gencat.cat/ca/arees_dactuacio/proteccio_civil/paus_hermes/

AUTOCAD

- AUTOCAD 2023

Fernando Montaño La Cruz

Ed. ANAYA

ISBN-13 978-8441547148

AMBITO DE LAS INFRAESTRUCTURAS LOGISTICAS Y DE TRANSPORTE FERROVIARIAS

- *Gestión de Infraestructuras Ferroviarias. ADIF*

http://www.adif.es/es_ES/index.shtml

- *Operación Ferroviaria GRUP Renfe*

http://www.renfe.com/empresa/index.html

- *Gestión y Operación Ferroviaria FGC*

http://www.fgc.cat/cat/index.asp

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- *Material ferroviario. Trenes*

http://www.listadotren.es/

- *CIAF. Comisión de Investigación de Accidentes Ferroviario. Ministerio de Fomento*

http://www.fomento.gob.es/MFOM/LANG_CASTELLANO/ORGANOS_COLEGIADOS/CIAF/

- *AESF. Agencia Estatal de Seguridad Ferroviaria. Ministerio de Fomento*

http://www.seguridadferroviaria.es/

RSSB. Rail Safety and Standards Board. (GB Rail)

http://www.rssb.co.uk/

Software

This subject will use

- The basic software of the Office 365 package
- AutoCAD by Autodesk Student version
- MS Project trial

Language list

Name	Group	Language	Semester	Turn
(TE) Theory	1	Catalan/Spanish	second semester	afternoon
(TE) Theory	2	Catalan/Spanish	second semester	afternoon

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