

**Información del Plan Docente**

<b>Academic Year</b>	2016/17
<b>Academic center</b>	104 - Facultad de Medicina
<b>Degree</b>	459 - Master's in Public Health
<b>ECTS</b>	2.0
<b>Course</b>	1
<b>Period</b>	Second semester
<b>Subject Type</b>	Optional
<b>Module</b>	---

**1.Basic info****1.1.Recommendations to take this course****1.2.Activities and key dates for the course****2.Initiation****2.1.Learning outcomes that define the subject****2.2.Introduction****3.Context and competences****3.1.Goals****3.2.Context and meaning of the subject in the degree****3.3.Competences****3.4.Importance of learning outcomes****4.Evaluation****5.Activities and resources****5.1.General methodological presentation**

The pupils who deal subject had to overcome the obligatory subjects of this

master: Methodology in Public Health I and II.

The subject has a fundamentally applied orientation with face t9o face scheduled sessions.

## 68706 - Advanced statistics

After a brief review of theoretical concepts It is passed to solve a practical case and them are commented and interpret the results obtained by means of statistical packages.

Then each student solves a research problem that needs statistical techniques discussed in class. This research the teacher corrects it and each student exposes the doubts and difficulties that they have been arising.

Tutorships are realized in group and individuals to demand of the pupils in which are solved the doubts and concepts that have not remained clear.

All the information stays at the disposal of the pupil in the Digital Educational Ring.

Individual study of recommended bibliography

### 5.2.Learning activities

1. Theoretical Practical classes
2. Study and problem solving
3. Individual study

### 5.3.Program

Lesson 1. COR curves.

Lesson 2. Multinomial logistic regression .

Lesson 3. Sample size estimation for different epidemiological studies designs.

Lesson 4. Exploratory Factor Analysis .

Lesson 5. Survival analysis .

Lesson 6. Cox regression.

### 5.4.Planning and scheduling

Lessons	Date	Time	Professor
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## 68706 - Advanced statistics

Lesson 1. Curvas ROC	First day of class	16,30-18,30	E. Rubio
Lesson 2. Multinomial logistic regression.		19-21	
Lesson 3. Sample size estimation for different epidemiological studies designs.	Second day of class	16,30-18,30	C. Feja
Lesson 4. Exploratory Factor Analysis.		19-21	T. Martínez
Lesson 5. Survival analysis.	Third day of class	16,30-18,30	J. Santabárbara
Lesson 6. Cox regression.		19-21	
ENTREGA TRABAJO FINAL	See generally master calendar		All teachers

### 5.5. Bibliography and recommended resources

- David G. Kleinbaum, Mitchel Klein (2010) Logistic Regression: A Self-Learning Text. Third edition. Ed Springer DOI 10.1007/978-1-4419-1742-3

- David G. Kleinbaum, Lawrence L Kupper, Azhar Nizan, Eli Rosenberg E. Applied regression analysis and other multivariable methods (3<sup>a</sup> ed). Ed Nelson Education. California. 2013

- David W. Hosmer, Stanley Lemeshow (2000). Applied logistic regression. Second edition. Ed John Wiley and Sons.

- David G. Kleinbaum and Mitchel Klein (2012) Survival Analysis: A Self-Learning Text. Third edition. Ed Springer.

- David W. Hosmer, Stanley Lemeshow and Susan May (2011). Applied Survival Analysis: Regression Modelling of Time-to-Event Data. Second edition. Ed John Wiley and Sons.

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- Javier Santabábara Serrano, Encarnación Rubio Aranda, Cristina Feja Solana (2014). Análisis de Supervivencia aplicado con SPSS. Curvas de Supervivencia y Modelo de Regresión de Cox. Ed DIGICOPY. Universidad de Zaragoza (Facultad de Ciencias Económicas y Empresariales). Zaragoza, 2014.
- Javier Santabábara, Raúl López, Encarnación Rubio, Elena Lobo, Guillermo Marcos (2015). Cálculo del tamaño de la muestra en estudios biomédicos. Ed Prensas de la Universidad de Zaragoza. Zaragoza, 2015.
- Miguel Ángel Martínez-González, Almudena Sánchez Villegas, Estefanía A.Toledo Atucha, Francisco Javier Faulín Fajardo. Bioestadística amigable. 3ª ed. Ed. Elsevier España S.L. 2014
- Pardo Merino A. y Ruiz Díaz M.A. (2002). SPSS 11. Guía para el análisis de datos Ed. Mc Graw Hill
- Rivas, MJ. y López, J. (2000) Análisis de Supervivencia. Cuadernos de Estadística. Editorial La Muralla.