

## Scoring M2 SE

Course title – Intitulé du cours	Scoring
Level / Semester – Niveau / semestre	M2 SE
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	ILLIG Aude
Other teacher(s) – Autre(s) enseignant(s)	A professional expert
Other teacher(s) – Autre(s) enseignant(s)	
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Lecture Hours – Volume Horaire CM	9h
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	21h
Course Language – Langue du cours	
TA and/or TP Language – Langue des TD et/ou TP	

### **Teaching staff contacts – Coordonnées de l'équipe pédagogique :**

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Office T213

### **Course Objectives – Objectifs du cours : Standard (ordinary) linear model**

#### **Part 1 : Theoretical course (Aude ILLIG)**

- Simple linear model
- Multiple linear model
- General (or multivariate) linear model
- Generalized linear model
- Zoom on the logistic regression

#### **Part 2 : Applied part, data study (External expert)**

#### **Prerequisites – Pré requis :**

- Descriptive statistics: qualitative (categorical), quantitative variables
- Probability
- Inferential Statistics: estimators, confidence intervals, tests
- Mathematical Statistics: statistical models, least squares, maximum likelihood

### **Grading system – Modalités d'évaluation :**

A classical exam for the theoretical part and a project/oral defense for the second part.

**Bibliography/references – Bibliographie/références :**

Generalized Linear Models With Examples in R, P. K. Dunn and G. K. Smyth, Springer, 2018.

chapters 1 and 6 of Extending the linear model with R, J.J. Faraway, Chapman & Hall/CRC, 2006.

chapter 7 of W.N. Venables and B.D. Ripley, Modern Applied Statistics with S, 2002, Springer.

chapter 1 and 2 of Generalized additive models, an introduction with R, S. Wood, Chapman & Hall/CRC, 2006.

chapter 2 of L. Fahrmeir and G. Tutz, Multivariate statistical modelling based on generalized linear models, Springer series in statistics, 1994.