

Intitulé du cours

Course title – Intitulé du cours	SAS
Level / Semester – Niveau /semestre	M2 / S1
School – Composante	Ecole d'Economie de Toulouse
Teacher – Enseignant responsable	Marine DOINEAU
Other teacher(s) – Autre(s) enseignant(s)	Marianne HABERT
Lecture Hours – Volume Horaire CM	0
TA Hours – Volume horaire TD	0
TP Hours – Volume horaire TP	13h30 (SAS)
Course Language – Langue du cours	English (international track) French (standard track)
TA and/or TP Language – Langue des TD et/ou TP	Anglais

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

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Course Objectives – Objectifs du cours :

The objective is to give students in economics bases in one of a reference software and programming language necessary for data scientists: SAS. Through practical sessions, students should be able to manipulate datasets (import, clean, compute indicators, and visualise them).

Prerequisites – Pré requis :

Basis of descriptive statistics.

Practical information about the sessions – Modalités pratiques de gestion du cours :

SAS :

Practical tutorial: 21.5 hours for SAS (Tutorials : 9 sessions (International Track) or 3 sessions (Standard Track) + Project). The tutorials are dedicated to intermediate practical programming in SAS and SAS SQL, data importation, formatting, manipulation and statistical visualisation. The course will also

introduce the use of macro variables and programs. The lessons are based on the e-learning offered by SAS.

There will be a final project using all the concepts learnt during this class.

Personal computer allowed. Headphones required

Session planning – Planification des séances

International Track

Session 1: Data step process. Summarizing Data.

Session 2: Manipulating Data with Functions.

Session 3: Creating and using custom formats.

Session 4: Combining Tables.

Session 5: SQL Joins.

Session 6: Queries and Subqueries. Set Operators.

Session 7: SAS Macro.

Session 8: Processing Repetitive Code.

Session 9: Restructuring Tables.

Standard Track

Session 1: Data step process. Summarizing Data. Manipulating Data with Functions. Creating and using custom formats

Session 2: Combining Tables. SQL Joins. Queries and Subqueries.

Session 3: Set Operators. SAS Macro. Processing Repetitive Code. Restructuring Tables.