uc3m Universidad Carlos III de Madrid

Simulation and Resampling methods

Academic Year: (2018	2019)	Review date:	11-04-	2018

Department assigned to the subject: Statistics Department

Coordinating teacher:

Type: Electives ECTS Credits: 6.0

Year : 4 Semester :

DESCRIPTION OF CONTENTS: PROGRAMME

- 1. Random number generation
- 2. Monte Carlo methods
- a. Rejection method
- b. Importance sampling
- 3. Markov Chain Monte Carlo Methods
- a. Metropolis Hastings algorithm
- b. Gibbs sampling
- c. Slice sampling
- 4. Resampling methods
- a. Bootstrap
- b. Jacknife
- c. Randomization tests
- d. Cross-validation

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals):	40