COURSE NAME: **Back-End for Big Data Analysis**		
Degree Program: **Master in Big Data Analytics** Course Director: Dr. Francisco Javier Calle Gómez	**ECTS: 3**	**1st Half-term**

WEEKLY SCHEDULE

#week	dd/MM	#session	SESSION DESCRIPTION	GROUP		Required room different from class (computer room, video-room, etc.)	STUDENT'S WORK DURING THE WEEK		
				Presential	Non presential		DESCRIPCTION	HOURS (presential)	HOURS (out of class)
1	18/9	1	- Item 1: Storage Paradigms - Evolution of Storage & DBMS - OLTP vs. OLAP - Back End supporting analytics	X			Study of materials	1.5	2
		2	Item2: Structured Storages (1/2) - The Relational Model - Relational Statics - Relational Dynamics	X			SQL basics review	1.5	5
2	25/9	3	Item 2: Structured Storages (2/2) - SQL data language - Analytical querying with SQL	X		COMPUTER ROOM	Optional Assignment	1.5	5
		4	ITEM 3. Information Acquisition and preparation (1/3) - Acquisition and extraction	X		COMPUTER ROOM	Study of materials	1.5	2

3	2/10	5	ITEM 3. Information Acquisition and preparation (2/3) - Transformation - Cleaning	X		COMPUTER ROOM	Assignment	1.5	3
		6	ITEM 3. Information Acquisition and preparation (3/3) - Integration	X		COMPUTER ROOM	Assignment	1.5	3
4	9/10	7	Item 4: Document Oriented Back-End (1/6) - Introduction to MongoDB - Foundations and Basic Concepts	X		COMPUTER ROOM	Study of materials	1.5	3
		8	Item 4: Document Oriented Back-End (2/6) - First steps in MongoDB			COMPUTER ROOM	Exercises	1.5	3
5	16/10	9	Item 4: Document Oriented Back-End (3/6) - Querying with MQL (MongoDB)	X		COMPUTER ROOM	Study of materials Exercises	1.5	3
		10	Item 4: Document Oriented Back-End (4/6) - Analytical querying in MongoDB - Aggregation and Map-Reduce			COMPUTER ROOM	Assignment	1.5	3
6	23/10	11	Item 4: Document Oriented Back-End (5/6) - Replication in MongoDB - Sharding	X		COMPUTER ROOM	Study of materials Assignment	1.5	4
		12	Item 4: Document Oriented Back-End (6/6) - Replication and Sharding Exercise			COMPUTER ROOM	Replication & Sharding home-exercise	1.5	3

7	30/10	13	Item 5: Column Oriented Back-End - Introduction to Cassandra	X			Study of Materials	1.5	3
		14	Item 5: Column Oriented Back-End - Design with Cassandra	X		COMPUTER ROOM	Assignment	1.5	5
TOTAL CURSO								**21**	47
	6/11	10:30	Exam	X				2	5
TOTAL HORAS								**23**	52