



UCAM
UNIVERSIDAD
CATÓLICA DE MURCIA

SHORT COURSE IN **BIG DATA FUNDAMENTALS & APPLICATIONS IN BIOINFORMATICS**



 **MODALITY**
On Campus

 **CAMPUS**
Murcia

 **DURATION**
2 weeks

 **CREDITS**
4 ECTS

 **MINIMUM**
10 students

Objectives

- To explore techniques and tools for interpreting and analyzing large volumes of data.
- To study and analyse different hardware architectures in Big Data environments.
- To analyse and understand different strategies for cleaning, modeling and analyzing data from the Big Data perspective.
- To learn security and privacy techniques applied to Big Data.
- To learn about real problems where the problem of large volumes of data is present, especially in Bioinformatics.

Additional Information

- **Place:** On Campus (Murcia)
- **Hours:** 40 hours
- **Schedule:** Monday to Friday. 09:00-14:00 or 16:00-21:00
- **Dates:** January / July

Schedule

MODULE 1

SESSION 1

09:00	Tour in UCAM + Course Introduction
11:30	BREAK
12:00	Introduction to Big Data
14:00	LUNCH
17:00	-
20:00	Murcia Cultural Tour

SESSION 2

09:00	Big Data Technologies
11:30	BREAK
12:00	Hadoop, Spark, Latest technologies
13:30	LUNCH

SESSION 3

09:00	Hands-on sessions on Big Data Tech
11:30	BREAK
12:00	Lab session
14:00	LUNCH

SESSION 4

09:00	Addressing the Challenge of Securing Big Data
11:30	BREAK
12:00	Interface and Costs of Big Data
14:00	LUNCH

SESSION 5

09:00	Towards data processing in Big Data
11:30	BREAK
12:00	Introducing to Intelligent Data Analysis
14:00	LUNCH

MODULE 2

SESSION 1

09:00	The Landscape of HPC Platforms for the Big Data Challenge
11:30	BREAK
12:00	Future Trends in developing computer AR
14:00	LUNCH

SESSION 2

09:00	Graphic supercomputer for Big Data era
11:30	BREAK
12:00	Application Examples
13:30	LUNCH

SESSION 3

09:00	Lexical analysis and sentiment analysis I
11:30	BREAK
12:00	Lexical analysis and sentiment analysis II
13:30	LUNCH

SESSION 4

09:00	Introduction to Big Data in Structural Bioinformatics and Drug Discovery
11:30	BREAK
12:00	Introduction to Big Data in Structural Bioinformatics and Drug Discovery
13:30	LUNCH

SESSION 5

09:00	-
14:00	Company Visit: Answare & Visualitis

Services Included

- 1 Professor/tutor for free
- Accommodation
- Breakfast and lunch (excluding weekends)
- Transport Card (Murcia city)
- Teaching materials
- UCAM welcome pack
- Murcia city guided tour
- UCAM Course Completion Certificate
- 1 company visit per week

Airport transfer to Murcia or Pick up services are not included