

<b>Module title</b> Big Data Technologies				
<b>Module code</b> YBDT	<b>Level</b> Bachelor (B.Sc.) IN, IT	<b>Hours per week</b> 4	<b>ECTS credits</b> 5	<b>Duration</b> 2 weeks block course + virtual lectures
<b>Module instructor</b> Laurent d'Orazio, ISIMA, France		<b>Lecture type</b> Regular lecture, on line consultations	<b>Prerequisite(s)</b> Good understanding on software engineering, good programming skills	<b>Grading</b> Exam Project Assignment
<b>Objectives</b> Cloud Computing enables to address the increasing needs of resources of many fields of scientific (for example genome sequencing, particle physics), economic (e-commerce, business intelligence, or business process) and societal (health, social networks, education, etc.) applications, where data, especially Big Data, play a crucial role.				
<b>Content</b> This course aims at giving a flavour of both Big Data and Cloud Computing, in particular focusing on new technical trends. It will introduce important concepts related to these domains and the main historical contributions they rely on (utility computing, grid computing, parallel and distributed DBMS). It will then describe the main stacks in Big Data management (storage, query processing), with concrete systems such as Google MapReduce execution environment, Apache Hadoop and its file system HDFS, Apache Spark, Facebook Hive for analysis, or the popular key-value store MongoDB.				
<b>Textbook/teaching material</b> <ul style="list-style-type: none"> <li>• No prescribed text. Recommended reading lists will be provided.</li> <li>• Lecturer provided materials on e-learning platform.</li> </ul>				

Note: this is not the official course descriptor according to the "Studien- und Prüfungsordnung" (SPO)