



## COURSE PRESENTATION FORM

<b>COURSE NAME</b>	<b>Knowledge Bases and Databases - Stream, Level A</b>
<b>COURSE CODE</b>	70173
<b>LECTURER</b>	Diego Calvanese
<b>TEACHING ASSISTANT</b>	Mariano Rodriguez-Muro
<b>TEACHING LANGUAGE</b>	English
<b>CREDIT POINTS</b>	4
<b>LECTURE HOURS</b>	24
<b>EXERCISE HOURS</b>	12
<b>OFFICE HOURS LECTURER</b>	Friday, 15:00 – 17:00 Palais Trapp, Via della Mostra 4, office 2.08
<b>OFFICE HOURS TEACHING ASSISTANT</b>	Time to be determined Via Sernesi 1, Block C, office 5.16
<b>PREREQUISITES</b>	Notions about first-order logic as taught in an introductory BSc course on Logic; notions about relational databases as taught in an introductory Bsc course; attendance of a course on Knowledge Representation is an advantage, but not strictly required.
<b>OBJECTIVES</b>	The aim of the course is to provide students with an understanding of the formal foundations of advanced topics in databases, and in particular in the application of techniques developed in knowledge representation to classical data management problems.
<b>SYLLABUS</b>	The lectures cover the problems of management of incomplete and inconsistent data, information integration, ontology mediated information access, reasoning about queries, and query reformulation.
<b>TEACHING FORMAT</b>	The course is organized as frontal lectures on the course topics, possibly complemented by monographic seminars that serve as a starting point for discussing the techniques involved. During lab sessions the students will familiarize with the usage and internals of state-of-the-art tools for managing and querying relational data sources in the presence of constraints (e.g., expressed through an ontology), and will work on a project.
<b>ASSESSMENT</b>	The exam consists of: - a project [59 % of mark] + a final oral exam [41 % of mark]



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Both parts have to be passed to pass the exam.

In case of a positive mark, the project will count for all 3 regular exam sessions of the Academic Year (i.e., if the student fails the oral exam, he keeps the project and only needs to retake the oral exam).

#### **READING LIST**

Lecture notes and reading material covering the course topics will be provided during the course. Additional reading material may be assigned on an individual basis, depending on the assigned project.

#### **SOFTWARE USED**

Protégé ontology editor. MySQL database engine.  
Ontology-based Data Access Tool.

#### **LEARNING OUTCOME**

Students will acquire an understanding of the advanced languages, methodologies, and the use of knowledge representation techniques for accessing and querying information sources.

#### **COURSE PAGE**

<http://www.inf.unibz.it/~calvanese/teaching/kbdb/>