



COURSE PRESENTATION FORM – ACADEMIC YEAR 2010/2011

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| COURSE NAME | Seminar in Databases |
| COURSE CODE | 70124 (BSc and MSc 509) / 72082 (MSc 270) |
| LECTURER | Johann Gamper |
| TEACHING ASSISTANTS | -- |
| TEACHING LANGUAGE | English |
| CREDIT POINTS | 4 |
| LECTURE HOURS | 36 |
| EXERCISE HOURS | -- |
| TIME SPAN | 27.09.2010 - 21.01.2011 |
| TIME TABLE | See Timetable Page |
| OFFICE HOURS LECTURER | During the lecture time, Tuesday, 11:00-12:00 am, Faculty of CS, POS Building, piazza Domenicani 3 , office 2.15 |
| OFFICE HOURS TEACHING ASSISTANT | -- |
| PREREQUISITES | <p>Students should have a solid mathematical foundation and be familiar with the basic concepts in databases and database management systems. Some basic knowledge in spatial and network databases is very helpful.</p> <p>These prerequisites are covered in the following courses: Algebra, Analysis, Probability Theory and Statistics, Introduction to Databases, Data Management Systems, Data Structures and Algorithms.</p> |
| OBJECTIVES | <p>The overall objective of this seminar is to study and discuss advanced technologies in database systems. This year's edition will mainly concentrate on spatial network databases.</p> <p>The didactic objective of the course is to train students to critically read and study a research paper. Students will also learn how to summarize the contents of a paper and how to present it in a seminar.</p> |
| SYLLABUS | <p>The papers that will be studied cover various advanced topics in temporal and spatial databases, including the following ones:</p> <ul style="list-style-type: none">• Parallel aggregation for temporal databases• Approximate temporal aggregation• Incremental computation of temporal aggregates• Sequenced spatio-temporal aggregation• Shortest path, NN, isochrone queries |



- etc.

TEACHING FORMAT

The course is organized as a series of seminars, given by the students. Each seminar consists of the presentation of a scientific paper followed by a discussion. In the first week students can bid for papers. The total number of papers assigned to each student may depend on the number of students, but will not be more than 2-3 papers. The teacher will assist extensively students in studying the papers, including the most relevant related work, and in preparing the presentation.

ASSESSMENT

The assessment consists of two parts:

- 50%: Paper presentation and active participation in the seminar;
- 50%: Final oral exam consisting of questions on the topics presented in the seminars, in particular about the other papers.

Both parts are required to be positive to pass the exam.

READING LIST

The list of papers will be presented in the first lesson.

SOFTWARE USED

None.

LEARNING OUTCOME

Students completing this course should

- know some state of the art research results in spatial network databases;
- be able to read and understand a scientific paper describing advanced database technologies;
- be able to investigate a research problem and search for additional information when the paper is not self contained;
- be able to present and explain the complex content of a research paper to an audience.

COURSE PAGE

<http://www.inf.unibz.it/dis/teaching/SDB>