GS239: SPRING 1996

Temporal Databases, Temporal Logic and Dynamic Models

Instructor: Carlo Zaniolo

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Course Objectives CS239 Temporal DBs is a new course–or almost.

- Introduction (Week 1):
  - Temporal issues in Intelligent Information Systems
  - Temporal constructs in SQL2.
  - An Ontology of Time
- Introduction to TSQL2 (Week 2,3).
- Time-series systems and other Temporal Databases (Week 4):
- Temporal Logics, $\mathrm{Datalog}_{1S}$, and logic based systems: (Week 5,6)
  - Storage structures and query optimization for temporal DBs.
- Database Dynamics and their models (Petri Nets, State Charts) (Week 7)

  MIDTERM
- Architectures and implementations of Temporal Databases (Week 8-9)
- Advanced Topics and Student Presentations (Week 10)

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Work Plan and Grade Basis:

- Midterm: 1/3
- Students' Presentations (final weeks): 1/3
- Take-Home project+final: 1/3

  Project will also include small programming assignements based on those assigned during the course; final will include questions on presentations.

Required Background : Students must have completed CS240A or equivalent.

Required Textbooks : None.

Recommended Textbooks :

Tansel, A. et al., *Temporal Databases: theory design and implementation,* Benjamin/Cumming, 1993.

R. T. Snodgrass et al. *The TSQL2 Temporal Query Language*, Kluwer Academic Publishers, 1995.