

CMD-L3: Biomedical data management

Person in charge and Representative	Vidal
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Semester	3
Topic cluster	Computational method development
Duration/Credit	7 lectures of 1.5 hours (to be discussed)
Time	The exact date incl. time will be announced separately
Place	Online. Dial-in data are sent separately
Prerequisite for the lecture	Introduction to Scientific Databases Knowledge Engineering and Semantic Web
Aim of the lecture	<p>This lecture aims at achieving the following objectives:</p> <ul style="list-style-type: none">• Learn and apply methodologies for the physical design of scientific relational databases.• Study techniques for query optimization over scientific relational databases.• Study non-traditional data models (e.g., wide-column, graph, document, and key-value).• Design scientific databases using non-traditional data models.• Analyze scientific ontologies and controlled vocabularies.• Study main techniques for knowledge extraction from scientific data sources, e.g., scientific literature and biomedical open data.• Study the main concepts of data integration and implement scientific data integration systems.• Learn federated query processing over scientific data integration systems.