

Teaching Reflections - CIS 420 Database Systems

CIS 420 is a 3-credit senior-level elective course for computer science students. I have taught this course every fall semester since 2017 (except 2022) at SUNY Potsdam. This is one of the core electives for Data Analytics track that we are planning on offering as soon as we get approval from SUNY.

Database is one of my fields of research expertise, and I was able to redesign the course significantly from its past offering. I introduced several new topics that were not covered before, e.g. BigData concepts, NoSQL, and use of commercial cloud centers. As Database Systems is a fast-moving field with significant innovation being led by the tech industry, I went beyond theory to introduce students to these advances in the field. I did this by requiring students to read, present, and discuss BigData related research papers from Google, Facebook and Amazon and explored how Big data was handled by data centers.

During pandemic in Fall 2020 this course was offered in synchronous mode. An important aspect of this course is a group project that students spend a significant time on. With the online offering, a few students had difficulty forming groups and working together remotely. To incentivize continuous work on the project, I required students to submit updates on their progress in three phases. Some students in their evaluations at the end of the semester stated that they would have preferred more project checkpoints along the way. Going forward, I will definitely implement a more frequent checkpoint system for projects.