

CSE 241 and CSE 341

CSE 241 places a greater emphasis on the *use* of database systems rather than the algorithms that form the foundation for database system implementation. The latter topics are the focus of CSE 341, which can be taken as a substitute for CSE 241.

Both courses assume no prior database experience and cover the basics of database usage. The coverage of SQL in CSE 341 is more rapid with more left to the student to discover outside of class so that more time can be devoted to system internals and related algorithms. Although both have the same formal prerequisites, 341 assumes greater mathematical sophistication (having had CSE 140 is a help, but it is not required) and a general understanding of computer systems.

CSE 241 is promised every spring term. Fall terms are less certain, but it WILL be offered in Fall 2021. CSE 341 is offered only when feasible, but it WILL be offered in Spring 2021.

Sophomores and first-year students needing a grade-level override to take 341 may request that from the instructor (hfk2@lehigh.edu).

CSE 241 Database Systems and Applications (3)

Design of large databases; Integration of databases and applications using SQL and JDBC; Transaction processing; Performance tuning; Data mining and data warehouses. Not available to students who have credit for CSE 341 or ISE 224. Prerequisite: CSE 017.

CSE 341 Database Systems, Algorithms, and Applications (3)

Design of large databases; Normalization; Query languages (including SQL); Transaction-processing protocols; Query optimization; Performance tuning; Distributed systems. Not available to students who have credit for CSE 241. Prerequisite: CSE 017.

WHICH COURSE SHOULD YOU TAKE?

The following are issues to consider in choosing between the two courses:

- Both of these courses satisfy the CSE 241 requirement for CSB students
- If you are a graduate student, you are eligible only for CSE 341.
 - If you have already taken a database course, CSE 341 will be largely a repetition.
 - You'll need an override to register. To get an override, you need to show me that you have the Java and data-structure knowledge to complete the course successfully. Overrides are not automatic.
 - If you are not a computer-science graduate student but seek to learn a bit about computing, CSE 341 is *not* a good choice. Students are expected not only to know Java but to be highly competent in doing independent software development. The project intentionally leaves many design decisions to the student.
- If you are an undergraduate considering graduate study in computer science, you should take CSE-341 because it goes deeper into such issues as query processing and transaction processing and provides a deeper understanding of *why* database systems are built the way they are.
- If you are an undergraduate with career goals more focused on business than computer science, you should take CSE 241 because the focus of that course is more on the use of database systems to solve problems rather than the construction of the database system itself.
- If you took ISE 224, only CSE 341 is open to you.

Questions: Contact Hank Korth (hfk2@lehigh.edu).