Q: Who is CS 253 designed for?

A: Data Science (DSCS. DSST, or DSMA) and Artificial Intelligence (AI or AIP) students who are not dual majors with Computer Science.

Q: What is the difference between CS 251 and CS 253?

A: Examples of a few differences:

Material covered in CS 253	Difference between 253 and 251 topics and coverage
More on basic data structures	253 expands linked list coverage, recursion on linked structures
Binary Search trees	253 has a reduced focus on details to keeping trees balanced under insertion and deletion; focus on the big picture and operations/queries supported
Hashing	253 adds material on hashing in Python's data structures
Examples of Probabilistic and Sparse Data Structures	This is not covered in 251
Strings	Expanded coverage compared to 251
Introduction to graphs	does not cover applications of DFS like strongly connected components and bio connectivity covered in 251
projects	May include 1-2 projects in Python

Q; Should DS and AI majors take CS 251 or CS 253 in Spring 2024?

A: DS and AI majors are encouraged to take CS 253 in Spring 2024. It <u>will</u> count in place of CS 251, but only for DS and AI majors

Q; Why should DS and AI majors take CS 253 in Spring 2024?

A: This course gives a broad introduction to the most important data structures and algorithms in computer science. The emphasis is on data structures and their use in algorithms relevant for Data Science and Artificial Intelligence and their applications.

Q: I am a CS major. Can I take CS 253 instead of CS 251?

A: No. CS majors must take CS251 (no exception).

Q: I am a CS minor. Can I take CS 253 instead of CS 251?

A: No. CS minors must take CS251 (no exception).

Q: I am a CS major. Can I take CS 253 and CS 251?

A: CS 253 course credit may <u>not</u> be counted toward a CS degree.

Q: I am a CS minor. Can I take CS 253 and CS 251?

A: No. CS 253 cannot be used toward the CS minor.

Q: I am a CS major. Can I take CS 253 as an elective?

A: No. CS 253 cannot be used as a CS major elective or as a free elective. CS 253 course credit may <u>not</u> be counted toward a CS degree nor toward the total credits needed for a CS degree.

Q: I am a CS minor. Can I take CS 253 as an elective?

A: No. CS 253 cannot be used toward the CS minor.

Q: I am a CS major. I took and passed both CS 251 and CS 253 and got a better grade for CS 253. Since I passed both courses, can CS 253 be used instead of CS251 in my transcript?

A: No. CS 253 course credit may <u>not</u> be counted toward a CS degree nor toward the total credits needed for a CS degree.

Q: I am a DS/AI major only. Can I take CS 251 instead of CS 253?

A: Yes until Fall 2024 when the DS and AI major requirements will be revised. CS 253 is a Data Structures course specifically designed for DS and AI students.

Q: I am double majoring in CS and DS/AI. Can I take CS 253 instead of CS 251.

A: No. Since you are a CS major, you must take CS 251 (no exception).

Q: I am double majoring in CS and DS/AI. Should I take CS 253?

A: No, taking CS 251 satisfies the requirement for CS 253 for dual CS and DS/AI students.

Q: I am DS/AI major CODOing to or adding CS and have taken CS 253. Will it count in place of CS 251?

A: No, CS majors are required to take CS 251 (no exception).

Q: I am a DS/AI major and a CS minor, can I take CS 253 instead of CS 251?

A: No. Since you are a CS minor, you must take CS 251 (no exception).

Q: I am an ECE major and a CS minor, can I take CS 253 instead of CS 251?

A: No. Since you are a CS minor, you must take CS 251 (no exception).

Q: Is CS 253 easier than CS 251?

A: No. We are designing CS 253 to be on par with CS 251 in terms of relevance, content, and difficulty. CS 253 focuses on related topics which align more with the background, interests, and needs of Data Scientists and Artificial Intelligence Scientist positions.

Q: Can I test out CS 253?

A: No. CS 253 is under design, so there is no examination for testing out the course.

Q: If I test out CS 251, can I also test out CS 253?

A: No. CS 253 covers topics not covered in CS 251.

Q: I am a MATH major (MA, MACS, MAHO…). Can I take CS 253 instead of CS 251?

A: No. CS 253 cannot be used toward the MA majors.

Q: I am a MATH minor. Can I take CS 253 instead of CS 251?

A: No. CS 253 cannot be used toward the MA minor.

Q: I have the Applications in Data Science Certificate. Can I take CS 253 instead of CS 251?

A: No. CS 253 cannot be used toward the certificate.

A diagram to simplify the course requirement based on the student's major or minor: