Should I take CS 210X or CS 2102?

CS 210X (Accelerated Object-Oriented Design Concepts) will assume a higher degree of proficiency both in programming in general and in Java in particular compared to CS 2102 (Object-Oriented Design Concepts). Note that, in terms of preparing you for upper level courses in CS, both CS 2102 and CS 210X will serve you well. It is better to do well in CS 2102 than to do poorly in CS210X. All the "extra material" that might be covered in CS 210X can be learned during subsequent coursework.

Generally speaking, if you received an A in CS 1102 (Accelerated Introduction to Program Design) and were comfortable with the pace of that course, then you should definitely take CS 210X (but do read the further information below). An exception might be if you have little or no Java experience.   Other students in CS 1102 and 1101 (Introduction to Program Design) should carefully review the information below and make a decision based on their prior experience, learning style and desire for a challenging workload.

Important: Transfer between CS 210X and 2102 is governed by the usual WPI course add/drop rules. There are no special arrangements, as was the case for CS 1102 and 1101. Also, in AY 2016-2017, CS 210X will be taught only in B term, whereas CS 2102 will be taught in B and D terms.

What will I learn in CS 210X compared to CS 2102?

In CS 210X you will learn most of the same content as students in CS 2102, but at a significantly accelerated (approximately 2x) pace. Topics common to both courses include:
- Object-oriented programming design principles (objects and message passing, polymorphism, encapsulation) and practice.
- Canonical data structures of computer programming (lists, trees, heaps, hashtables, graphs, etc.) and abstract data type (ADTs)
- Program design and refactoring

In CS 210X, you will also learn some topics not covered in CS 2102, including (in approximately decreasing order of time spent):
- Event-driven programming
- Regular expressions, grammars, and parsing
- Parallel computation
- Human computation (e.g., via Mechanical Turk)
(Note that, since CS 210X is being taught for the first time, the list above is not yet definitive.)

Moreover, in CS 210X, the examples and exercises given in class and in programming projects will be motivated by more advanced computer science topics including:

- machine learning
- social networks
- computer games
- intelligent tutoring systems

Note that **no prior knowledge** of the above fields will be assumed.

Finally, note that, in CS 2102, roughly the first week is spent acclimating students from Racket to Java. CS 210X, in contrast, will have no such acclimation period, as prior proficiency in Java will be assumed.

What will I do in CS 210X compared to CS 2102?

Most of the time you spend in both CS 210X and CS 2102 will be on programming projects. In CS 210X, the magnitude of these projects -- in terms of difficulty, lines of code, amount of computation, and amount of data processed -- will tend to be larger than in CS 2102.

I want to take CS 210X, but have a time conflict. Can I do any of the CS 210X material within CS 2102?

You are welcome to work on CS 210X material during CS 2102 labs (instead of the standard 2102 lab material). The 2102 grading staff doesn't have the capacity to grade different homework assignments, so you'll still need to do the 2102 assignments if you are officially enrolled in 2102. Naturally, you are welcome to look at the 210X materials on your own time and work through whatever you wish.

If you are in CS 2102 but would rather be doing more CS 210X material, let Professor Fisler (who is teaching CS 2102) know at the start of the term. If multiple such students are in the same lab sections, we'll try to pair you up to work on the more advanced material together.