18.06 vs. 18.C06

(both fulfill same course requirements, prereqs! …course 6-3 suggests 18.C06 for sufficiently advanced students)

Linear Algebra

Linear Algebra and Optimization

(faster paced)

≈ 60% overlap

more linear algebra vs. more optimization

(more depth in linalg., e.g. in factorizations, vector spaces, eigenstuff; …a little optimization)

(more depth in optim. algorithms, problem types, convexity, examples; less depth in matrix/vector concepts)

more physics vs. more data science/ML

(linear ODEs, PDEs, functions as "vectors")

(discrete data classification, data bias, robustness)

some computers vs. computer mini-projects

(depends on instructor!)

(some programming experience assumed!)

18.06 vs. 18.700

(see also 18.701 for students with *much* more proof experience)

"applied" vs. "pure" math

few proofs vs. formal proofs expected

(deduce patterns from examples, informal arguments)

(definitions to lemmas to theorems … training in proof writing)

more applications vs. more theorems

more concrete vs. more abstract

(but still more abstract than other 18.0x!)

some computers vs. only pencil-and-paper

(depends on instructor!)