List of topics

Chapter 1
Syllabus
1/sqrt(x)
Sources of error
Alternative floats
IEEE Floats
Fund. floating point props.
Condition numbers
    Sharp (elm-wise) vs. Weak
    (norms)
Condition number of Ax=b
Overall floating point error
Variance computation

Chapter 2
Best approx prob.
Integrals, inner-products, and
    measures
Weierstrauss approx. thm.
Orthogonal functions
Lagrange interpolant
Chebyshev nodes
Barycentric interp.
Newton interp.
Divided differences
Hermite interpolation
Splines
Piecewise interp.
Error equation

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Exam plan

Current plan (won't change unless I truly feel it's in your best interests to change)

- 10:30am Thursday (Eastern) -> 10:29am Friday (eastern) (24hrs)

- Expect to spend multiple hours on this, 3? 6? <= 10

- **No collaboration** (remember, you all said you were okay with the tradeoffs here)

  - If someone asks for help, tell them you'll have to email the professor if they ask again because you don't want to risk your grade!

Types of problems to expect

Like homework questions.

Like book questions.

Some discussion questions – what topics from class are relevant?

Some implementation questions.

Some questions

Do I have to typeset my solutions?

- No, but…

- You have 24 hours, I expect *well* written solutions!

  - I'm not going to struggle to understand your answers. If I can't quickly identify where you solved the hard parts of the question, you'll lose points.

- You will have Latex for the exam (I'll release an overleaf document all setup for you…)

- Exams submitted on gradescope.

- One problems/page