AMSC/CMSC 466, Spring 2026: *Introduction to Numerical Analysis*

Instructor Dr. T. von Petersdorff, office MTH 4409, e-mail **tvp@math.umd.edu**, **office hours Wed 10-12** (or by appointment)

No required textbook I will post **PDF notes** about the main topics on ELMS (a few hours after the lecture). I recommend that you take notes since the lectures contain additional explanations and examples.

Syllabus

- Errors and Computer Arithmetic
- Linear Systems of Equations
- Interpolation
- Linear Least Squares Problems
- Nonlinear Systems of Equations
- Numerical Integration

Grading Policy The grade will be obtained from a weighted average of exams, homeworks, and final exam (see below). With a total percentage $\geq 90\%, 80\%, 70\%, 60\%$ you are guaranteed an A-, B-, C-, D-, respectively. These cutoffs may be lowered slightly.

2 Exams (Total 40%) In the case of *legitimate* and *documented* absences according to the University Attendance Policy (ugst.umd.edu/courserelatedpolicies.html) a makeup exam will be given. This can be an oral exam. You must notify me of any such absence as soon as possible.

Homeworks (Total 30%) There will be about 7 assignments, containing both theoretical problems and computer problems with Matlab. **Homeworks must be handed in on ELMS as a single PDF file**. For Matlab problems you have to use the format explained on the ELMS page. Homeworks must be done individually by each student without AI tools. Sharing of material (in particular code) is considered academic dishonesty.

Final Exam (30%) The cumulative final exam will be on **Fri, May 15, 4pm-6pm in the usual room**.

Matlab This course will use Matlab. You can download Matlab for free from terpware.umd.edu. **Please read the "Matlab information" on ELMS.** If you are not familiar in Matlab you should **study the "Matlab Onramp" interactive tutorial immediately**. **We will NOT use symbolic commands** (`sym`, `syms`, etc.) in this course unless specifically stated. **Matlab homework must be submitted in the format explained on the ELMS page.**