

CEM 882 Exam #1 Review Sheet

The exam will be given on Tuesday, March 18, 2025 starting at 8:30 am. You can start later than 8:30 am but I would like everyone to start by about 10 am. Within reason, you may take as much time as you like for the exam within a single sitting.

I will provide the fundamental constants. You may bring one sheet of 8.5" × 11" paper containing whatever hand-written and non-xeroxed information you think is relevant including relevant equations and formulas. I won't provide any equations so you should put important equations on your sheet. You may write on both sides of the sheet.

You may bring a calculator for the exam but probably won't need to use it.

The exam will take place by Zoom. Your camera should be on so that I can see you while you take the exam. You can ask me questions by Zoom or email during the exam or you can call me on the phone.

You should show all of your work. In general, you will not receive credit for a correct answer with no explanation, calculation, and/or derivation. On the other hand, partial credit may be given for incorrect answers for which parts of the problem-solving approach were correct.

The exam will be based on material covered through Lecture Notes 4 as well as Homeworks 1, 2, and 3. The questions will include some derivations based on lecture material, explanations of some physical concepts and parameters relevant to spectroscopy, and analysis of electronic spectra of proteins and/or nucleic acids. Understanding the lecture and class notes, homework, Bohr atom, and electric and magnetic multipole moments and their interactions with radiation will be useful for the exam.