Here are some guidelines for the mid-term. Note: The list below is not meant to be all-inclusive.

NOTE: Make sure that you have checked your book against the publisher’s book errata sheet and made corrections as appropriate.

1. Keep in mind that the exams are closed book, closed notes and no calculators will be permitted.
2. Mid-Term Exam covers textbook Chapters 1-3 inclusive.
3. The mid-term exam will focus on problem solving questions. However, there may be a few essay type questions.
4. Review all homework assignments. Use homework assignments as a study guide.
5. Review previous quizzes and use as a study guide.
6. Review all lecture slides.
7. Review and answer the "review of essential terms and concepts" questions at the end of each chapter.
8. Work the exercises at the end of each chapter that were not assigned as homework for extra practice.
9. Understand the examples shown through each chapter as well as the examples covered in class.
10. Lectures and corresponding class discussion.
11. Your notes from the lectures should serve you as a good list of topics to know.
12. Check the link "tips on exam taking" on the course's useful links page as an added study aid.
13. Know how to apply the principles of Moore’s Law.
14. Know positional number system basics and how to convert between different number system bases.
15. When performing number conversion between difference base/radix number systems, know how to check the answers.
16. Know the "numbers to remember" (refer to figure 2.1 in the text) - memorize/ know how to reconstruct from your memory recall.
17. Boolean Algebraic identities will be provided to use for solving Boolean expression/equation identity and expression/equation simplification problems.
18. Know the rules for Modulo 2 arithmetic.
19. Know how to perform binary-based addition, subtraction, multiplication and division.
20. Know how to perform floating-point addition, subtraction and multiplication in binary format.
21. Know how to represent floating point decimal numbers in a binary floating point representation.
22. Understand the sources of floating point error and how to compute the error?
23. Know the principles of the encoding techniques for data recording and transmission in section 2.7
24. Know how to compute and check CRCs what purpose CRC’s serve.
25. Know the fundamentals concepts of operation between combinatorial and sequential circuits.
26. Know how to evaluate and analyze combinatorial and sequential circuits.
27. Know how to use truth tables to evaluate Boolean expressions.
29. Be able to write Boolean expressions from a digital circuit diagram.
30. Know how to create an equivalent digital circuit diagram for a given Boolean expression.
31. Know the common Boolean operators and their equivalent logic gates.
32. Know the universal logic gates and their equivalents.
33. Understand the principle of clocks as applied to sequential circuits.
34. Understand the principles of abstraction and information hiding as applied to digital circuit design.
35. Understand the relationship between the binary number system, Boolean Algebra, and digital logic.
36. Check the useful links page for additional reference information.

19 February 2006