Second Midterm – Information

Time: Thursday, February 17, 1-2:15pm.

Place: In class, B131. If you have a McBurney VISA then you should go to Van Vleck 903 at 1pm.

What’s on the test?

• All material covered in weeks 1-9 of the course and the corresponding assignments.
• All material covered in Sections 13.1, 13.3-4, 14.1-8, 14.10, 15.1-15.4 of the textbook
• You should be able to state the important definitions and theorems.
• Besides the topics listed on the previous information sheet, you should be able to solve the following types of problems (not an extensive list!):
  – Finding local extreme values and saddle points using the first and second derivative test.
  – Finding extreme values with a constraint using the Lagrange multipliers method.
  – Finding extreme values on a closed and bounded domain.
  – Finding the Taylor expansion of a two-variable function, determining the linear/quadratic/cubic approximation near a point, estimating the error in the approximation.
  – Computing double integrals using single variable integrals.
  – Finding regions of integration for double integrals, reversing the order of integration.
  – Finding the area, moments, center of mass of a thin plate with a certain shape and density.
  – Computing double integrals using polar coordinates.
  – Computing triple integrals in rectangular coordinates (finding the region of integration, changing the order of the integration).