

# EP 501 Homework 4: Differentiation, Integration, and Multidimensional functions

November 12, 2019

## Instructions:

- Submit all source code and publish Matlab results in .pdf form via Canvas. Please zip all contents of your solution into single file and then submit in a single zip file.
- Discussing the assignment with others is fine, but you must not copy anyone's code.
- I must be able to run your code and produce all results by executing a single top-level Matlab script, e.g. `assignment1.m` or similar.
- You may use any of the example codes from our course repository: <https://github.com/mattzett/EP501/>.
- Do not copy verbatim any other codes (i.e. any source codes other than from our course repository). You may use other examples as a reference but you must write you own programs (except for those I give you).

## Purpose of this assignment:

- Solve ODEs numerically and interpret the results.
- Develop good coding and documentation practices, such that your programs are easily understood by others.
- Exercise good judgement in numerical problem setup.
- Demonstrate higher reasoning to synthesize a problem and devise a basic algorithm to solve it.

1. (a)