CSE562M: Analog Integrated Circuits Project 2

In this assignment you need to design a current-mode circuit that implements the following function:

$$f(x) = x^3 - \frac{3}{2}x^2 + \frac{1}{2}x$$

1. Using MATLAB plot the function with input x varying from 0 to 1.
2. Design a circuit which takes the input as a current and produces an output current that tracks f(x). You are allowed to use only one current source or sink for generating references and biases. Assume that the supply voltage is 3V.
3. Simulate the circuit using CADENCE tools. Export the data points from the simulation into a text file and import the data into MATLAB.
4. Compare the CADENCE simulation results with MATLAB simulation results.
5. For your presentation/report you need to submit 3 slides:
    (a) **Introduction Slide** – if you have used any simplification.
    (b) **Circuit Schematic**
    (b) **Results:** Plot comparing MATLAB simulation and circuit simulation.