

(20 pts) Approx. 2 days

The first part of our unit on navigation is about learning to fly a Cessna 172. Our class uses a program called “X-Plane Learn to Fly” as a flight simulator to learn about the different controls and navigational tools available to pilots. We’ll start with some simple flying and playing around in the simulator to get used to it, and then we’ll dial in a specific flight path and learn what it takes to go from point A to point B flying on your own! Before you’re finished, you’ll have completed two long distance flights in XPlane.

1. Start by watching the presentations on flying in XPlane: *First Flight* and *Getting Started in XPlane*
2. Take a few of notes on XPlane, including details about the program itself and what keys to bind for your joystick controls. Feel free to print the reference document to include for your notes!
3. Now, use those as a guideline to get your joystick controls setup properly.
4. Now, with the Cessna 172 ready to fly, learn to take-off and land. The *First Flight* video has some good insights into taking off and landing successfully. Make sure that you can control your plane as you take-off and land 3 times without crashing!
5. Now, watch the *Cross-Country Flight* and *KCOS-DEN Fly Through* presentations. Take some notes on how the pilot is navigating their plane. How do they know where they are going? Take a full page of notes on VOR Navigation and the ideas presented in these videos.
6. Next, complete the cross-country flight from KCOS to Pueblo Memorial airport. You need to take off successfully, navigate in as straight a route as possible, and then land at the proper airport. Use the navigation tools and your flight map to find the right airports!
 - a. Note: When you get up in the air and are flying, it’s okay to increase the speed to X2 or x4 so that you’re not flying for 45 minutes... maybe don’t go to the max speed, because you’ll zoom past the airport, but you can increase the speed once you’re in the air so you don’t have to just sit and stare at the screen for too long.

| Part 1: Tasks | 5 points | 4-3 point | 2-1-0 points |
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|  Learn to Takeoff & Land | + You set up the joystick following the suggested controls + You were able to take-off and land successfully 3 times + You flew from KCOS to DEN | - You were only able to take-off and land successfully 1 or 2 times - You did not fly from KCOS to DEN | - You could never take-off and land |
|  Take Notes on VOR Navigation | + You took a full page of notes on the <i>First Flight</i> , <i>Getting Stated in XPlane</i> , and the <i>Cross-Country Flight</i> presentations + Your notes include specific information about the “6-Pack” of dials | - You did not take a full page of notes - Your notes do not include much information on the “6-Pack” of dials | - Your notes are too brief or incomplete |
|  Complete Cross Country Flight | + You successfully completed the cross-country solo flight from KCOS to Pueblo Memorial | - You got most of the flight done, but never landed - Your path is extremely wiggly | - You did not do the cross-country flight - You landed at the wrong airport |

