**OBJECTIVE**

Build on prior lessons by finding the true course between two airports and then determining the magnetic course.

**MATERIALS (Per Group)**

- VFR sectional chart
- Aeronautical chart plotter with rotating azimuth wheel

**PROCEDURE**

1. Divide into groups of three or four. You will need to select one airport as your starting point, and three additional airports that will represent destinations for three flights from your starting airport. When complete, you should have three plotted true courses in three different directions (for example, routes toward the south, east, and west).
   a. Determine the true course between your starting airport and the first additional airport.
   b. Using the same starting airport, determine the true course to a second airport of your choosing.
   c. Again, using the same starting airport, determine the true course to the third airport of your choosing.
2. Recalling what you learned last semester, find the dashed magenta isogonic lines on the sectional that show the magnetic variation near your chosen airports. Try to figure out what the magnetic course would be between those airports using only the information on the charts. Once you’ve determined an answer, check your work using SkyVector.
   2. As a reminder: To check your work using SkyVector, right-click on the first airport and choose “PLAN” next to the airport name in the pop-up menu. Do the same thing on the destination airport, and SkyVector will display the magnetic course line between the two airports, labeled with the distance and direction in degrees.

**QUESTIONS**

1. Starting Airport: Destination Airport 1:
   a. True Course:
   b. Magnetic Variation:
   c. Magnetic Course (calculated):
d. Magnetic Course (SkyVector):

2. Starting Airport: Destination Airport 2:
   a. True Course:
   b. Magnetic Variation:
   c. Magnetic Course (calculated):
   d. Magnetic Course (SkyVector):

3. Starting Airport: Destination Airport 3:
   a. True Course:
   b. Magnetic Variation:
   c. Magnetic Course (calculated):
   d. Magnetic Course (SkyVector):

4. What did you find out about the effect of the magnetic variation on the true course?

5. Which course do you think a pilot references and flies in the airplane?

6. What would happen if a pilot flew a true course when they meant to fly a magnetic course?