

Instrument Pilot Ground School – January 2008

Hello everyone.

Kevin Olson of Centerline Flight LLC in association with Twin Cities Flying Club is pleased to offer an Instrument Pilot Ground School. This unique aviation ground school is perfect for the Private Pilot who is interested in working toward their instrument rating and preparing for the FAA Instrument Pilot knowledge exam. **The ground school will also include a special segment aimed specifically at rated instrument pilots who want to build confidence and improve their knowledge of instrument flying. The advanced segment will focus specifically on GPS technology, GPS approaches, Garmin GPS navigator techniques and tricks, with a special emphasis on incorporating WAAS into your everyday flying. Garmin 430W and 530W units will be the main focus for learning proper use and instrument approach techniques. Free downloadable GPS simulators will be used extensively for learning and practice.**

The full instrument ground school will run for 13 weeks and be held on Tuesday evenings from 6:00 to 9:00 p.m. beginning January 8, 2008. The class will run through April 1, 2008. The advanced ground school segment (for already rated instrument pilots) will "piggy-back" on the full ground school and will take place during the last five weeks of the class, beginning on Tuesday March 4, 2008. The exact location for this ground school has not yet been finalized, but it will likely be in the Plymouth/Maple Grove area. The class location will be communicated to class participants as soon as plans are finalized.

The course fee for the full instrument ground school is \$350, which includes the class text, FAA knowledge exam prep book, instrument charts, etc. The course fee for the advanced pilot segment is \$150 and includes all necessary materials. This popular course is limited to 20 participants and will likely fill very quickly. Registration will begin immediately, with a registration deadline of Friday November 30, 2007.

To register for either the full ground school or the advanced segment, please complete the attached registration form and mail it along with a check for the registration fee to the address on the registration form.

Registered participants will receive additional class information, including a full class syllabus in early December. Class text and other supplies will be distributed at the first class. In the meantime, if you have questions or need additional information, please contact Kevin Olson at [kpo@centerlineflight.com](mailto:kpo@centerlineflight.com) or by phone at 612-239-9627. Additional class information will also be available soon at [www.centerlineflight.com](http://www.centerlineflight.com).

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## **2008 Instrument Ground School Syllabus**

**Instructor: Kevin Olson, CFII**

### **Week 1 – January 8**

Welcome, course plans, facility, logistics, schedules, course materials, introductions, etc.  
What this class will do (and what it won't do)

*"Let's fly IFR"*

- Cross-country planning basics (preflight planning)
- Weather considerations
- Pilot considerations
- Airplane considerations
- FAA considerations (requirements)
- Instrument basics
- Introduction to instrument systems
- Flight by reference to instruments

### **Week 2 – January 15**

*"So how do we get there?"*

- Instrument Flight Training
- Cross-country planning (airspace, airways, direct-to, etc.)
- Weather issues
- Your worst enemy: ICE! (and how to deal with it...or not)
- Air Traffic Control
- Flight plans
- IFR Aeronautical Charts
- "Alphabet Soup" (MEA, MOCA, OROCA, MSA, MRA, MVA, MDA, DH, DA, etc.)
- Introduction to aircraft systems

### **Week 3 – January 22**

*"I wonder if my airplane is up to the task (not to mention, me!)"*

- Aircraft systems – continued
- Inspection requirements
- System malfunctions and associated problems
- Abnormal procedures
- Emergency procedures
- Auto Pilots: (type, system, general operation, etc.)
- Human factors and ADM (Aeronautical Decision Making)
- Single Pilot Operations, CRM (Crew/Cockpit Resource Management)
- Safety considerations (PAVE, IMSAFE, etc.)

### **Week 4 – January 29**

*"I'm ready to go...I think"*

- Picking up the clearance (tower, ATC, GCO, AFSS, cell phone, Void Times)
- Departure Procedures (DP's, ODP's)
- Enroute operations
- Air Traffic Control issues
- Communications
- More about weather
- FAA regulations

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### **Week 5 – February 5**

*"I'm on my way. Now what?"*

- Changes in your clearance
- Communication failure
- Instrument/equipment failures
- Auto-pilot use
- Weather changes
- "Co-pilot" support
- Safety along the way

### **Week 6 – February 12**

*"I love GPS-direct, but what other choices are there?"*

- Navigation systems: VOR, NDB, LOC, GS, DME
- Interpreting navigation instruments
- Intercepting and tracking courses
- Navigation techniques and tricks

### **Week 7 – February 19**

*Getting to your destination...*

- Arrival procedures (STAR's)
- "I need you to hold..."
- Instrument approach procedures
- Approach Light Systems
- Weather considerations
- Minimums
- FAA requirements
- Missed approach procedures
- Instrument Approach "Gotcha's"

### **Week 8 – February 26**

*Instrument flying review*

- Instrument approach procedures review
- Regulations
- Charts
- Systems
- Weather
- NOTAMS

## **Advanced Segment**

### **Week 9 – March 4**

*Back to basics (Hey, it can't hurt...)*

- Instrument systems
- Aircraft systems
- Navigation systems
- Auto pilots
- Flight planning
- Regulations
- Safety considerations
- Weather planning
- Aeronautical charts

## **2008 Instrument Ground School Syllabus – Continued – Page 3**

### **Week 10 – March 11**

*How the “big boys” do it...*

- High altitude flying
- Advanced navigations systems
- Intercontinental travel
- Dispatch services
- IRS (Inertial Reference Systems)
- RNP (Required Navigational Performance)
- RVSM (Reduced Vertical Separation Minimums)

### **Week 11 – March 18**

*Cross-country flight planning*

- Flight planning options
- Departure Procedures
- Enroute operations
- Arrivals
- Approach procedures
- Communication tips and tricks

### **Week 12 – March 25**

*Approach procedures – In depth*

- Approach design
- Approach choices
- Approach planning/briefing
- GPS navigation
- GPS approaches
- WAAS

### **Week 9 – April 1**

*More on GPS – Using it to the fullest*

- Garmin, King, etc.
- Common functions, differences, Pros-n-Cons
- Tips and tricks
- Course summary
- Preparing for the test