

Airspace Teaching Notes:

1. Two Categories:
 - a. **Regulatory**
 - i. Class A, B, D, E, Prohibited, Restricted, TFR, Special VFR
 - b. **Non-regulatory**
 - i. Class G, MOAs, Warning Areas, Alert Areas, Controlled Firing Areas
2. Four Types:
 - a. Controlled
 - b. Uncontrolled
 - c. Special Use
 - d. Other Airspace
3. The category and type of airspace are dictated by:
 - a. Complexity or density of A/C movement
 - b. Nature of operation
 - c. Level of safety required
 - d. National and public interest
4. Airspace Class, Equipment Requirements, and Weather Minimums
 - a. **Class A** = Altitude
 - i. General Description:
 1. 18,000ft MSL up to and including FL600 (Not Shown on Charts)
 - ii. Pilot Certification Requirements
 1. Private Pilot
 2. IFR Rating
 3. IFR Currency
 - iii. ATC Entry Requirements:
 1. IFR flight plan
 2. IFR Clearance
 - iv. Equipment Requirements:
 1. 4096 Mode C Altitude reporting transponder.
 2. Equipped for IFR Flight
 - v. VFR Weather Minimums:
 1. Not applicable, VFR flight not allowed.
 - b. **Class B** = Busy
 - i. General Description:
 1. Airspace individually tailored, upside down wedding cake
 2. Generally extends from surface to 10,000ft MSL
 - a. Depicted using a blue line on chart
 3. All A/C receive separation services within airspace
 - ii. Pilot Requirements

1. Private pilot certificate
 2. Student pilot with Class B endorsement for that specific Class bravo
 - a. Receive ground and flight training
 - b. Logbook endorsement.
 - iii. Aircraft Requirements
 1. Operating Two-way radio communication
 2. 4096 Mode C Transponder (within 30 nm up to 10,000ft. msl)
 3. IF IFR: need a VOR or TACAN receiver
 - iv. ATC Entry Requirements
 1. ATC clearance to enter and operate
 - a. Need to hear “clear into Class Bravo”
 - v. VFR Weather Minimums
 1. 3sm visibility
 2. Clear of clouds
 - vi. Speed Limits:
 1. 250kts below 10,000MSL
 2. 250kts within Class B
 3. 200kts on VFR airway bellow Class B. (?)
- c. **Class C** = Commercial Aircraft
- i. General Description:
 1. Usually surface to 4000ft. AGL
 2. Depicted in MSL with Magenta line on chart
 3. ATC provides separation on work permitting basis.
 - a. Pilot must be aware of other traffic.
 4. Two rings/shelves and outer area.
 - a. 5nm radius inner ring from surface to 4000ft AGL
 - b. 10nm radius outer shelf no lower than 1200ft AGL up to 4000ft AGL.
 - c. 20nm outer area up to 4000ft. AGL, not depicted on chart,
 - i. Pilot should try to contact ATC if they want to fly through the airspace.
 - ii. Aircraft Requirements:
 1. Two-way radio communication
 2. Mode C Transponder
 - iii. ATC Entry Requirements:
 1. Establish and maintain two-way radio communication (ATC identifies your N-number) prior to entering airspace
 - a. No clearance required.
 2. Use assigned Transponder Code
 3. ATC provides separation and sequencing to primary airport
 - iv. Pilot Requirements:

1. No specific certification required
 - v. VFR Weather Minimums: (3152)
 1. 3sm visibility,
 2. 1000ft above clouds
 3. 500ft below clouds
 4. 2000ft. horizontal from clouds
 - vi. Airspeed Limits:
 1. Must maintain less than 200kts below 2500ft. AGL within 4nm of airport
- d. **Class D:**
- i. General Description
 1. Surface to 2500ft AGL
 2. Over airports with operating control tower
 3. Airspace is individually tailored and charted with blue segmented line
 - ii. Pilot Requirements:
 1. No specific certification required
 - iii. Equipment Requirements
 1. Two-way radio
 - iv. ATC Entry Requirements
 1. Establish two-way radio communication with tower prior to entering airspace (Tower acknowledges N-number)
 - v. VFR Weather Minimums: (3152)
 1. 3sm visibility,
 2. 1000ft above clouds
 3. 500ft below clouds
 4. 2000ft. horizontal from clouds
 - vi. Airspeed Limits
 1. Maintain less than 200kts.
- e. **Class E:** Everything Else
- i. General Description:
 1. Controlled airspace not defined as A, B, C, or D.
 2. Starts at either 1200ft AGL or 700ft AGL and extends up to the surface of the next airspace or up to 17,999 MSL (Class A)
 - a. Also exists above upper limits of Class A (above FL600)
 3. In some areas a scalloped line indicates altitude where Class E starts and Class golf is below. i.e. 12,500ft MSL
 4. Other areas where Class E exists are:
 - a. Over some airport surfaces with IFR approaches (segmented magenta line to the surface)
 - b. Associated with Class B, C, or D airports with instrument approaches

- c. Federal Airways
 - d. Enroute Domestic Areas (?, see AIM)
 - ii. Pilot Requirement:
 - 1. No specific pilot certification required
 - 2. Student pilot with solo endorsements
 - iii. Aircraft Equipment Requirement:
 - 1. No A/C equipment requirements below 10,000ft. MSL
 - 2. Above 10,000ft MSL, Mode C Transponder
 - iv. ATC Entry Requirement:
 - 1. None
 - v. VFR Weather Minimums:
 - 1. Below 10,000ft = (3152)
 - a. 3sm visibility,
 - b. 1000ft above clouds
 - c. 500ft below clouds
 - d. 2000ft. horizontal from clouds
 - 2. Above 10,000ft = (5111)
 - a. 5sm visibility,
 - b. 1000 above clouds
 - c. 1000 below clouds
 - d. 1 mile horizontal from a cloud
 - vi. Airspeed Limits:
 - 1. Below 10,000ft MSL = 250kts
 - 2. Above 10,000ft MSL = No limit
- f. **Class G:**
- i. General Description:
 - 1. Uncontrolled airspace no designated as A, B, C, D, or E
 - 2. See and Avoid, no ATC separation services provided
 - 3. Surface to 700ft or 1,200ft.
 - ii. No pilot certification requirement
 - iii. No A/C equipment requirement
 - iv. VFR WX Min:
 - 1. Below 1200 ft AGL
 - a. Day: **1 mile, clear of clouds**
 - b. Night: **3152**
 - i. 3sm visibility,
 - ii. 1000ft above clouds
 - iii. 500ft below clouds
 - iv. 2000ft. horizontal from clouds
 - 2. Above 1200ft AGL, below 10,000ft MSL
 - a. Day: **1152**
 - i. 1sm visibility,
 - ii. 1000ft above clouds
 - iii. 500ft below clouds
 - iv. 2000ft. horizontal from clouds

- b. Night: **3152**
 - i. 3sm visibility,
 - ii. 1000ft above clouds
 - iii. 500ft below clouds
 - iv. 2000ft. horizontal from clouds
 - 3. Above 1200ft AGL, and above 10,000ft MSL = 5111
 - i. 5sm visibility,
 - ii. 1000 above clouds
 - iii. 1000 below clouds
 - iv. 1 mile horizontal from a cloud
 - g. Other Regulatory Airspace:
 - i. Restricted Area:
 - 1. Start with the letter R- on chart.
 - 2. Required ATC clearance to fly through
 - ii. Prohibited Area:
 - 1. Starts with a P in the chart
 - 2. May never operate through.
 - h. Non-regulatory Airspace
 - i. Be familiar with controlling agency operating the airspace.
 - 1. Can be found in back of chart or AF/D
 - ii. Military Operation Areas:
 - 1. Large amount of military operations
 - 2. MOAs
 - iii. Warning Areas:
 - 1. Over coastal waters
 - 2. Starts with a W
 - iv. Alert Areas
 - 1. Starts with A
 - v. Controlled Firing Areas
 - 1. Not charted

| BASIC VFR WEATHER MINIMUMS | | |
|---|-------------------|---|
| Airspace | Flight Visibility | Distance from Clouds |
| Class A | Not Applicable | Not Applicable |
| Class B | 3 statute miles | Clear of Clouds |
| Class C | 3 statute miles | 500 feet below 1,000 feet above 2,000 feet horizontal |
| Class D | 3 statute miles | 500 feet below 1,000 feet above 2,000 feet horizontal |
| Class E Less than 10,000 feet MSL | 3 statute miles | 500 feet below 1,000 feet above 2,000 feet horizontal |
| At or above 10,000 feet MSL | 5 statute miles | 1,000 feet below 1,000 feet above 1 statute mile horizontal |
| Class G 1,200 feet or less above the surface (regardless of MSL altitude). Day, except as provided in section 91.155(b). | 1 statute mile | Clear of Clouds |
| Night, except as provided in section 91.155(b). | 3 statute miles | 500 feet below 1,000 feet above 2,000 feet horizontal |
| More than 1,200 feet above the surface but less than 10,000 feet MSL. Day | 1 statute mile | 500 feet below 1,000 feet above 2,000 feet horizontal |
| Night | 3 statute miles | 500 feet below 1,000 feet above 2,000 feet horizontal |
| More than 1,200 feet above the surface and at or above 10,000 feet MSL. | 5 statute miles | 1,000 feet below 1,000 feet above 1 statute mile horizontal |

| Class Airspace | Entry Requirements | Equipment | Minimum Pilot Certificate |
|----------------|---|---|---|
| A | ATC Clearance | IFR Equipped | Instrument Rating |
| B | ATC Clearance | Two-Way Radio, Transponder with Altitude Reporting Capability | Private—Except a student or recreational pilot may operate at other than the primary airport if seeking private pilot certification and if regulatory requirements are met. |
| C | Two-Way Radio Communications Prior to Entry | Two-Way Radio, Transponder with Altitude Reporting Capability | No Specific Requirement |
| D | Two-Way Radio Communications Prior to Entry | Two-Way Radio | No Specific Requirement |
| E | None for VFR | No Specific Requirement | No Specific Requirement |
| G | None | No Specific Requirement | No Specific Requirement |