FEDERAL AVIATION REGULATIONS

NOTE: The FAA now refers to the Federal Aviation Regulations as "14 CFRs" rather than "FARs." CFR stands for Code of Federal Regulations, and the Federal Aviation Regulations are in Title 14. For example, FAR Part 1 and FAR 61.109 are referred to as 14 CFR Part 1 and 14 CFR Sec. 61.109, respectively. Due to CFIs' and pilots' widespread use of the acronym FAR, we use FAR and 14 CFR interchangeably to familiarize you with both.

FAR PART 1

1.1 General Definitions

1. Airports are areas of land or water that are used or intended to be used for the landing and takeoff of aircraft, including any buildings and facilities.

2. A Glide Path Qualification Surface (GQS) is an imaginary surface extending from the runway threshold along the runway centerline to the Decision Altitude (DA) point.

FAR PART 61

61.3 Requirements for Certificates, Ratings, and Authorizations

1. The pilot in command must hold an instrument rating when operating under IFR or in weather conditions less than the minimums prescribed for VFR flight.

2. An IFR clearance is required when operating in Class A airspace.

61.51 Pilot Logbooks

1. Instrument flight time may be logged when flight is solely by reference to instruments under actual or simulated flight conditions.

    a. The location and type of each instrument approach completed and the name of the safety pilot must be included in the logbook for each simulated instrument flight.

    b. During VMC, a view-limiting device must be used.

2. An instrument flight instructor (CFII) may log instrument time when acting as an instrument flight instructor in actual instrument weather conditions.

61.57 Recent Flight Experience: Pilot in Command

1. In order to act as pilot in command under IFR, one must have logged instrument time (actual or simulated) within the preceding 6 calendar months in either the same category of aircraft (airplane) to be used or in an airplane flight simulator or flight training device and must have performed the following procedures:

    a. At least six instrument approaches
    b. Holding procedures
    c. Intercepting and tracking courses through the use of navigation systems

2. An instrument pilot who does not meet the experience requirements during the prescribed time or 6 calendar months thereafter must then pass an instrument proficiency check.

a. This check may be conducted by an FAA inspector, an FAA-designated examiner, or a certificated instrument flight instructor.

61.133 Commercial Pilot Privileges and Limitations

1. Commercial pilots without an instrument rating cannot carry passengers for hire on crosscountry flights during the day beyond a radius of 50 NM.

    a. Carrying passengers at night is also prohibited without an instrument rating.

FAR PART 91

91.3 Responsibility and Authority of the Pilot in Command

1. The pilot in command of an aircraft is directly responsible for, and is the final authority as to, determining the airworthiness and operation of that aircraft prior to each flight.

91.21 Portable Electronic Devices

1. The use of certain portable electronic devices is prohibited on aircraft that are being operated under IFR.

91.103 Preflight Action

1. Before beginning any IFR flight, the pilot must obtain and become familiar with information about weather reports and forecasts, fuel requirements, alternatives available if the planned flight cannot be completed, any known traffic delays, runway lengths at airports of intended use, and takeoff and landing distance information.

91.109 Flight Instruction; Simulated Instrument Flight and Certain Flight Tests

1. To operate an airplane in simulated instrument flight, you must have at least a private pilot who is appropriately rated in your aircraft occupying the other control seat as a safety pilot.

91.123 Compliance with ATC Clearances and Instructions

1. If you deviate from an ATC clearance in an emergency, you must notify ATC as soon as possible.

2. If you are given priority by ATC in an emergency, ATC may request that you submit a detailed report within 48 hr. to the manager of that ATC facility.

    a. The report may be required even though no rule has been violated.

3. During an IFR flight in IMC, if a distress condition is encountered, the pilot should immediately declare an emergency and obtain an amended clearance.

a. Distress is a condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.

91.129 Operations in Class D Airspace

1. If an aircraft's transponder fails during flight within Class D airspace, no deviation is required because a transponder is not required in Class D airspace.

91.131 Operations in Class B Airspace

1. Operations in Class B airspace require two-way radio communications with ATC and a Mode C transponder.

    a. If operating IFR, you must have a VOR receiver.

2. If it is necessary to conduct training operations within Class B airspace, procedures established by ATC for these flights within the Class B airspace will be followed.

91.135 Operations in Class A Airspace

1. An IFR flight plan is required when flying in IFR conditions in controlled airspace and at all times in Class A airspace.

a. Class A airspace includes the airspace from 18,000 ft. MSL up to and including FL 600.

91.155 Basic VFR Weather Minimums

Cloud Clearance and Visibility Required for VFR

Airspace	Flight Visibility	Distance from Clouds
Class A	Not Applicable	Not Applicable
Class B	3 SM	Clear of Clouds
Class C	3 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
Class D	3 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
Class E		
Less than 10,000 ft. MSL	3 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
At or above 10,000 ft. MSL	5 SM	1,000 ft. Below 1,000 ft. above 1 SM horiz.

Airspace	Flight Visibility	Distance from Clouds
Class G 1,200 ft. or less above the surface (regardless of MSL altitude)		
Day	1 SM	Clear of clouds
Night, except as provided in 1. below	3 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
More than 1.200 ft. above the surface but less than 10,000 ft. MSL		
Day	1 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
Night, except as provided in 1. below	3 SM	500 ft. Below 1,000 ft. above 2,000 ft. horiz.
More than 1,200 ft. above the surface and at or above 10,000 ft. MSL	5 SM	1,000 ft. Below 1,000 ft. above 1 SM horiz.

1. An airplane may be operated clear of clouds in Class G airspace at night below 1,200 ft. AGL when the visibility is less than 3 SM but more than 1 SM in an airport traffic pattern and within *1/2* NM of the runway.

2. When flying under a "VFR-on-top" clearance on IFR flights, you must fly at VFR altitudes and comply with VFR visibility and distance-from-clouds criteria.

91.157 Special VFR Weather Minimums

1. With some exceptions, special VFR clearances can be requested in Class S, Class C, Class D, or Class E airspace areas.

    a. The flight requirements are to remain clear of clouds and have visibility of at least 1 SM.

2. Flight under special VFR clearance at night is permitted only if the pilot is instrument rated and the airplane is IFR equipped.

91.167 Fuel Requirements for Flight in IFR Conditions

1. When flying IFR, you must carry sufficient fuel to fly to the first airport of intended landing, fly to the alternate airport (if required), and then fly for 45 min. at normal cruising speed.

2. An alternate airport is not required if the destination airport has

    a. At least one approved instrument approach procedure (lAP), and

    b. From 1 hr. before to 1 hr. after the ETA, a forecast of at least

        1) 2,000 ft. ceiling
        2) 3 SM visibility

91.1691FR Flight Plan: Information Required

1. Intended airports of landing on an IFR flight must have a forecast ceiling of at least 2,000 ft. and visibility of at least 3 8M for 1 hr. before and 1 hr. after the ETA. Otherwise, an alternate must be listed on your IFR flight plan.

2. When a pilot elects to proceed to the selected alternate airport, the landing minimums used should be the minimums specified for the approach procedure selected.

    a. To list an airport with a nonprecision approach as an alternate, the forecast weather must be for at least an 800-ft. ceiling and 2 8M visibility at your ETA.

    b. To list an airport with a precision approach as an alternate, the forecast weather must indicate at least a 600-ft. ceiling and 2 8M visibility at your ETA.

3. If no instrument approaches are prescribed, the minimums for listing an airport as an alternate on an IFR flight are forecast weather allowing descent from the MEA, approach, and landing under basic VFR.

91.171 VOR Equipment Check for IFR Operations

1. When making VOR operation checks, the date, place, bearing error, and pilot signature should be placed in the aircraft log or other record.

2. Operational checks of VORs must be made every 30 days.

3. The maximum allowable tolerance when performing an operational check of a dual VOR system is a 4° variation between the two indicated bearings.

    a. When performing an operational check using a ground-based VOT, the maximum tolerance is ±4°.

    b. When performing an operational check using an airborne checkpoint, the maximum tolerance is ±6°.

4. In addition to the VOR check that must be made at least every 30 days, the altimeter system and the transponder must have been inspected within 24 calendar months.

91.173 ATC Clearance and Flight Plan Required

1. No person may operate an aircraft in controlled airspace under IFR unless that person has

    a. Filed an IFR flight plan and
    b. Received an appropriate ATC clearance.

91.177 Minimum Altitudes for IFR Operations

1. Except when necessary for takeoff or landing, the minimum altitude for IFR flight (if none is prescribed in FAR Parts 95 or 97) is one of the following:

    a. 2,000 ft. above the highest obstacle within a horizontal distance of 4 NM over designated mountainous terrain

    b. 1,000 ft. above the highest obstacle within a horizontal distance of 4 NM over nonmountainous terrain

91.205 Powered Civil Aircraft with Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements

1. For IFR flight, navigation equipment must be appropriate to the ground facilities to be used.

2. Above 24,000 ft. M8L, DME is required if VOR navigational equipment is required.

3. A gyroscopic directional indicator, a gyroscopic attitude indicator, and a gyroscopic rate-ofturn indicator are required for IFR flight.

4. Aircraft being operated under IFR are required to have a slip-skid indicator, a clock with a sweep second pointer or digital presentation, and a pressure-sensitive altimeter.

91.211 Supplemental Oxygen

1. At cabin pressure altitudes above 15,000 ft. MSL, each passenger of the aircraft must be provided with supplemental oxygen.

2. At cabin pressure altitudes above 14,000 ft. MSL, the required minimum flight crew must be provided and use supplemental oxygen during the entire flight time at those altitudes.

3. Pilots can fly at cabin pressure altitudes above 12,500 ft. MSL up to and including 14,000 ft. MSL for up to 30 min. without supplemental oxygen.

    a. If a flight is conducted at these altitudes for more than 30 min., oxygen must be provided to and used by the required minimum flight crew for the time in excess of 30 min.

91.215 ATC Transponder and Altitude Reporting Equipment and Use

1. All aircraft must have and use an altitude encoding transponder (Mode C) when operating

    a. Within Class B airspace
    b. Within 30 NM of the primary Class B airport
    c. Within and above Class C airspace
    d. Above 10,000 ft. MSL except at and below 2,500 ft. AGL
    e. In Class A airspace

2. Request for deviations must be made to the controlling ATC facility.

    a. If the transponder fails during flight, ATC may authorize the aircraft to continue to the airport of ultimate destination.

        1) An aircraft with an operating transponder but without Mode C can request a deviation at any time.

    b. For operation of an aircraft that is not equipped with a transponder, the request for a deviation must be made at least 1 hr. before the proposed operation.

91.411 Altimeter System and Altitude Reporting Equipment Tests and Inspections

1. Each static pressure system and altimeter instrument must be tested and inspected by the end of the 24th calendar month following the current inspection.

4.4 NTS8 PART 830

1. NTSB Part 830, "Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail, Cargo, and Records," covers the procedures required for aircraft accident- and incident-reporting responsibilities for pilots.