

Drone-mounted radiation detectors would be extremely useful for performing radiological surveys, the goal of the Intelligent Radiation Awareness Drone (iRAD) undergoing design at the University of Michigan. Such drones would be subject to regulation under Title 14 Code of Federal Regulations Part 107, covering the commercial (including research) operation of drones weighing <25 kg. Recreational drones over 0.25 kg and all commercial drones must be registered with the Federal Aviation Administration (FAA). A commercial drone pilot's license, also known as a Remote Pilot Certificate, is required by individuals who wish to operate radiation-detecting drones <25 kg for any purposes beyond recreation. To be eligible for a commercial drone pilot's license, individuals must be at least 16 y old, understand English, and pass an aeronautical knowledge test. To prepare for the aeronautical knowledge test, individuals should study the FAA's Remote Pilot – Small Unmanned Aircraft Systems Study Guide. Online or in-person training courses can also provide comprehensive test preparation and review. Test topics include regulations, loading and performance, airport operations, radio communications, airspace, aeronautical charts, weather theory and services, aeronautical decision-making, physiological factors, maintenance, and inspections. Individuals are also required to undergo recurrent training every 24 calendar-months to maintain aeronautical knowledge recency. The Remote Pilot Certificate holder is responsible for properly registering their drone, becoming familiar with the airspace in the areas they plan to operate, and adhering to all regulations. Obtaining a commercial drone pilot's license requires an investment of time and effort and is an essential step for individuals looking to operate drones for any purpose beyond recreation. This poster will summarize regulatory and aeronautical science information relevant to operating a drone like iRAD both legally and safely.