

Objectives	<ul style="list-style-type: none"> The student will understand the elements related to managing and mitigating risk
Elements	<ul style="list-style-type: none"> Risk Management Process Levels of Risk Assessing Risk <ol style="list-style-type: none"> Risk assessment matrix PAVE Checklist <ol style="list-style-type: none"> IMSAFE, Personal Minimums, 61.57(a), (b), (c) AAV1ATE, AARROWPEC, Proficiency in aircraft NEWKRAFT 5'Ps Mitigating Risk
Schedule	<ul style="list-style-type: none"> Review lesson objectives Review lesson material Conclusion & Review
Equipment	<ul style="list-style-type: none"> White Board / Markers References iPad
CFI Actions	<ul style="list-style-type: none"> Present lesson Use teaching aids Ask/ answer questions
Student Actions	<ul style="list-style-type: none"> Participate in discussion Take notes Ask / answer questions
Completion Standards	<ul style="list-style-type: none"> The student will be able to understand the methods of risk management and be able to implement them into his/her flying

Additional Notes: _____

CE = Common Error

Introduction

Overview

Review objectives / Elements

What

Risk management is a decision-making process designed to perceive hazards systematically, assess the degree of risk associated with a hazard, and determine the best course of action

Why

Flying is inherently dangerous, but there are always ways to keep the danger to a minimum. This lesson will describe ways to safely deal with risks that may arise in the aircraft

How

Principles of Risk Management

Accept No Unnecessary Risk

- **Only accept the necessary risks**
 - Flying is impossible without risks, do not make it more dangerous than necessary
- **Make risk decisions at the appropriate level**
 - In single pilot situations, the pilot makes all decisions
 - In other situation, it might be a good idea to talk to more experienced pilot or CFI about a potentially risky situation
- **Accept risk when the benefits outweigh the costs**
 - Analyze pros and cons and make a decision accordingly
- **Integrate risk management into all stages of flight including planning**

Risk Management Process

Step 1: Identify the risk

- Many checklists can be used to assist in the process (see below)

Step 2: Assess the risk

- This is the most challenging part of risk management
- Use the risk assessment matrix to assist (see below)

Step 3: Mitigate the risk

- Find what needs to be done and implement the change

Levels of Risk

The levels of risk are measured in terms of:

- **Severity** (extend of possible loss)
- **Probability** (likelihood that a hazard will cause a loss)

Assessing Risk

- Pilots must differentiate in advice, the difference between a low-risk and high-risk flight
- Establish a review process and develop strategies to minimize risk on high-risk flights

Risk assessment Matrix

- Used to find and assess risk of a flight
- [Download the Risk Assessment Tool app](#)

PAVE Checklist

Pilot

- **Determining the condition of the pilot can be done with multiple checklists and precautions**
- **IMSAFE**
 - **Illness** – Are you sick?
 - **Medication** – Are you taking and medication?
 - **Stress** – Family, Money, Work, Relationship problems?
 - **Alcohol** – 14CFR 91.17 8 hours bottle to throttle, .04BAC, no influence
 - **Fatigue** – Well rested?
 - **Eating** – Well nourished
- **Personal Minimums** – Personal minimums can identify the risk based on the pilot's skill level
 - Consult a CFI or chief pilot to verify your personal minimums
- **Currency requirements 14CFR 61.57 (a), (b), (c)**
 - 61.57(a) – 3 TOL in preceding 90 days
 - 61.57(b) – 3TOL at night in past 90 days
 - 61.57(c) – 66HIT's (instrument)

Aircraft

- **The pilot should determine the risk associated with the aircraft; we do this similarly to the pilot**
- **AAV1ATE – Required inspections**
 - **AD's** – Complied with
 - **Annual Inspection** – 14CFR 91.409(a)(1) 12 calendar months
 - **VOR inspection** - 14CFR 91.171 (a)(2) – preceding 30 days (for IFR flight)
 - **100 hour inspection** – 14CFR 91.409 (b) 100 hours (for hire/flight instruction)
 - **Altimeter/Pitot-Static** – 14CFR 91.411(a)(1) – 24 Calendar Months (IFR flight)
 - **Transponder** – 14CFR 91.413(a) – 24 Calendar Months (wherever a transponder is needed)
 - **ELT** – 14CFR 91.207(c)(1,2),(d) – 50% battery life or 1 hour use, 12 calendar month

- **AARROWPEC – Required Documents on the aircraft**
 - **AD's** – Anything required by AD's
 - **Airworthiness certificate** – displayed to crew and passengers
 - **Registration** – Valid for 7 years
 - **Radio license** – International flight (one for pilot one for plane)
 - **Operating Limitations/AFM section 2**
 - **Current Weight & Balance** – AFM section 6
 - **Placards** – those required by section 2 of AFM/POH
 - **External Data Plate**
 - **Compass Deviation Card** – required by section 2 of AFM/POH
- **Proficiency in aircraft**
 - Don't attempt to fly an aircraft you are unfamiliar with
 - This could be aircraft type or avionics
 - Ask for a checkout flight if you are not proficient in the aircraft

EnVironment

- **Assessing the environment can be done using the NEWKRAFT checklist (14CFR 91.103)**
- **NEWKRAFT**
 - **NOTAMS** – Be familiar with all applicable NOTAMS
 - **Everything pertinent to the flight**
 - **Whether** – Obtain a whether briefing (see AC 91-92)
 - **Known ATC Delays** – Plan flight accordingly
 - **Runway Lengths**
 - **Alternatives** – Alternative plans
 - **Fuel** – 14CFR 91.167(IFR) & 14CFR 91.151(VFR)
 - **Takeoff and Landing Distance** – Per section 5 in POH/AFM

External Pressures

- **Assess the situation, is Johnny rushing you to takeoff so they can be early to the game etc.**
- **5P's**
 - **Plan**
 - **Plane**
 - **Pilot**
 - **Passengers**
 - **Programming**

Mitigating Risk

- After risk has been found, determine the actions needed to reduce the risk
- The checklists above can give insight on what areas to focus on in terms of reducing risk
- Don't be afraid to ask people like CFIs to come with you or just cancel the flight in general

Review & Conclusion

Conclusion

- It is extremely important that a pilot is able to recognize and mitigate risk to allow for safe flights for them and their passengers

Review

- [Risk Management Process](#)
- [Levels of Risk](#)
- [Assessing Risk](#)
 1. [Risk assessment matrix](#)
- [PAVE Checklist](#)
 1. [IMSAFE, Personal Minimums, 61.57\(a\), \(b\), \(c\)](#)
 2. [AAV1ATE, AARROWPEC, Proficiency in aircraft](#)
 3. [NEWKRAFT](#)
 4. [5'Ps](#)
 5. [Mitigating Risk](#)