Private Pilot

AVP 105 - Ground Lesson (GL) 1

Training Operations, Discovering Aviation

GL 1 Objectives

- Recognize the essential components of CPTC's Pilot Training Program
- Identify the medical and currency requirements for piloting an airplane
- Recognize the requirements to act as PIC of different types of aircraft
- Identify the concepts that apply to single-pilot resource management (SRM)
- Explain how to perform a self-assessment prior to flight and briefings during flight operations
- Recognize physiological factors that affect your performance during flight

Essential Components

- Use of Syllabus
- Dispatch Procedures
- Canvas and Canvas Policies
- Policies and Procedures – Read in Canvas
- Safety Procedures – Read in Canvas
- Take the Quizzes
- Flight Schedule Pro and Scheduling Expectations

Medical requirements for piloting an airplane

- Medical Requirements (61.23)
  - Must have medical certificate before soloing (Acting as PIC)
  - Obtain medical certificate from an AME
- Medical Certificate Classes
  - First Class – Operations requiring an Airline Transport Pilot (ATP) Certificate
  - Second Class – Operations requiring a Commercial Pilot Certificate
  - Third Class – Operations requiring a Private Pilot Certificate
  - Different durations depending on if you are over 40 or not and type of pilot privileges you are exercising
- Part 67 describes the physical requirements

Currency requirements for piloting an airplane

- Current Medical Certification
- To act as PIC of an aircraft…..
  - Complete a Flight Review every 24 calendar months
  - Most FAA checkrides count as a Flight Review
- To act as PIC of an aircraft carrying passengers, above plus…..
  - Three takeoffs and landings of the same category and class with the preceding 90 days
  - If at night, the takeoffs and landings must have been to a full stop, at least one hour after sunset to one hour before sunrise

Single-Pilot Resource Management (SRM)

- SRM – The art and science of managing all available resources prior to and during flight to ensure the successful completion of the flight
- SRM includes six concepts:
  - ADM
  - Risk Management
  - Task Management
  - Situational Awareness
  - Controlled Flight into Terrain Awareness
  - Automation Management

Aeronautical Decision Making (ADM) Concepts

- ADM – A systematic approach to the mental process to determine the best course of action in response to a given set of circumstances. ADM Process:
  - Recognize a Change
  - Define the Problem
  - Choose a Course of Action
  - Implement your decision
  - Evaluate the outcome
- ADM Steps – FAA's DECIDE Model
  - Detect
  - Estimate
  - Choose
  - Identify
  - Do the necessary Action
  - Evaluate

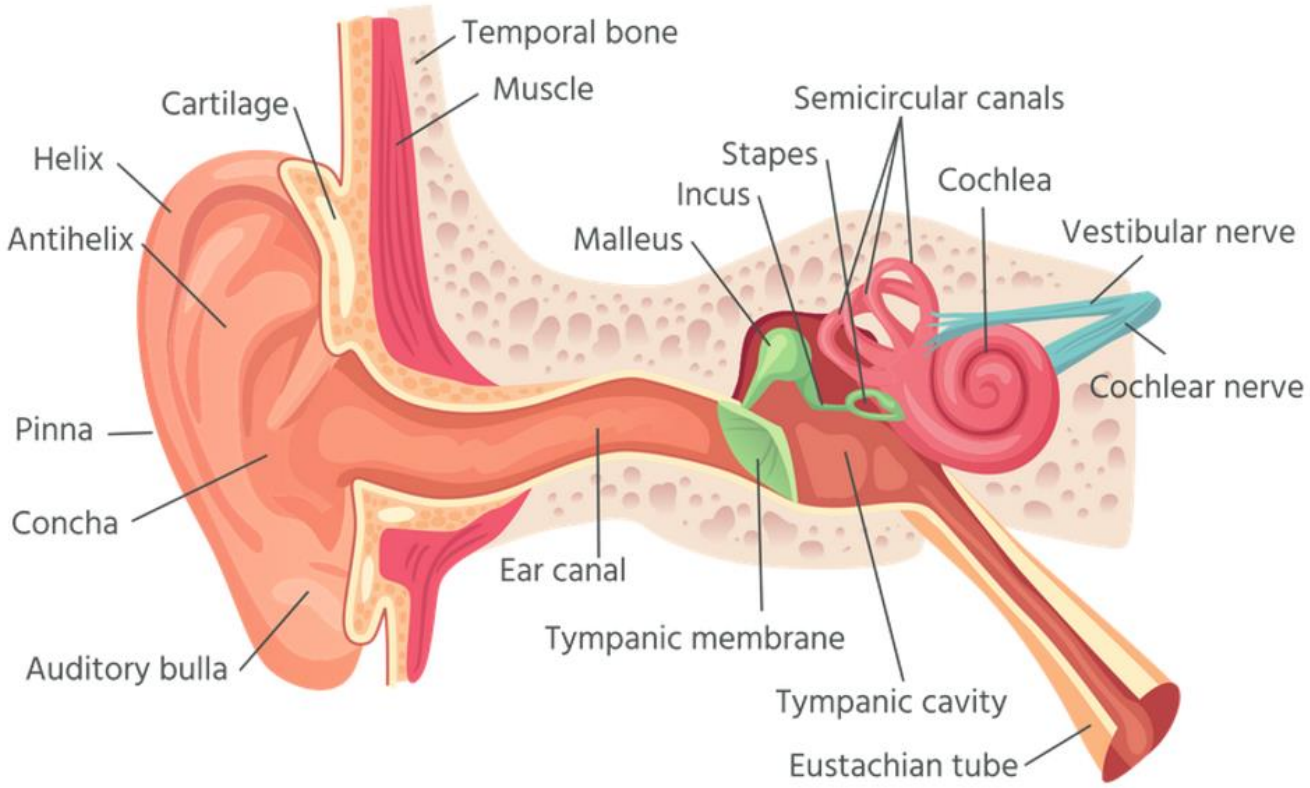
Threat and Error Management (TEM)

- TEM is meant to teach you to detect and respond to threats and errors to prevent an undesired aircraft state (UAS)
- Threat
  - Airplane
  - Airport
  - Weather
  - Flight Environment
- Errors
  - Skill-Based
  - Decision-Based
  - Perceptual
  - SRM/CRM

Aviation Physiology

- Pressure Effects
- Motions Sickness
- Stress
- Fatigue
- Noise
- Alcohol, Drugs, and Performance

Pressure effects - Ear and Sinus blocks



Pressure Effects -

- Toothache
  - From trapped air in cavities or dental abscess
- Gastrointestinal Pain
  - Trapped air in GI tract
- Scuba Diving – "The Bends"
  - Nitrogen could come out of solution
  - AIM Recommendations from section 8-1-2d, Decompression Sickness after Scuba Diving
    - The recommended waiting time before going to flight altitudes of up to 8,000 feet is at least 12 hours after diving which has not required controlled ascent (nondecompression stop diving)
    - At least 24 hours after diving which has required controlled ascent (decompression stop diving)
    - At least 24 hours before going to flight altitudes above 8,000 feet after any SCUBA dive
    - These recommended altitudes are actual flight altitudes above mean sea level (AMSL) and not pressurized cabin altitudes
    - This takes into consideration the risk of decompression of the aircraft during flight

Motion Sickness

- Caused by brain receiving conflicting messages about the orientation of your body
- No reflection on your ability as a pilot
- Let your instructor know if you aren't feeling well. You will not be learning much if you are feeling motion sickness
- Techniques to overcome motion sickness
  - Open fresh air vents
  - Make sure you are looking outside
  - Keep your head still
  - Do not fix with medication

Stress and Fatigue

- Some stress is good, keeps you alert and focused
  - Too much stress will detract from your learning
  - If you are feeling stressed to the point of being unable to learn then you should take steps to reduce your stress
- Fatigue
  - Fatigue is often associated with pilot error, both physical errors and judgement errors
  - If you are fatigued, your training will suffer
  - Counteract fatigue with exercise and sleep
    - If fatigued, you should consider not flying that day

Alcohol and Drugs

- Alcohol FARs
  - 8 hours bottle to throttle
  - Less than .04% BAC
  - Alcohol effects can be felt for 24 hours
  - Don’t fly if there is any question if you are under the influence
- Drugs
  - If it says, “Do not operate heavy machinery while taking this medicine” then don’t fly while taking that medicine
  - Consult an AME if medications may jeopardize your ability to fly

I'M SAFE – Personal Health Assessment

- Are you feeling **I**ll? Do you have symptoms?
- Have you taken **M**edication that would keep you from flying?
- Are you feeling **S**tressed (distracted)?
- Are you under the influence of **A**lcohol? Could you be?
- Are you **F**atigued?
- Am I **E**motionally upset? Distracted?

Competency-Based Training and Assessment (CBTA)

- Develop pilot competencies that create a pilot ready to meet challenges during flight.
- Technical Competencies
  - Regulations
  - Flight Path Management
- Human Factors Competencies
  - Communication
  - Leadership and Teamwork
  - Workload Management
  - Situation Awareness/Management of Information
  - Problem Solving/Decision Making

GL 1 Completion Standards

- Demonstrate understanding of policies and procedures
- Demonstrate understanding of CPTC's pilot training program, opportunities in aviation, human factors and CBTA during oral quizzing by the instructor
- Complete with a minimum score of 80 percent the Chapter Quizzes in Canvas for GL 1. Chapters 1A, 1B, 1C and 1D

Any Questions?

- Next - Ground Lesson 2 – Airplane Systems
- Read Chapter 2, Sections A, B and C – Airplane Systems