Aviation FAA Part 107 Class

Course Syllabus 25/26 School Year

Instructor: Lochren/Moll

Welcome to Aviation FAA Part 107 Class (18 weeks = 1 semester)

Course Description:

Students will be entering the world of UAS. In this class, we will discuss both small-type UAS systems and the industries they are revolutionizing.

This course is a theory and application course. It prepares students to take the FAA Part 107 exam. We also introduce some more advanced flight maneuvers. During practice flights, students engage in practical application of theory and flight maneuvers.

What will my classes be like?

This class is extremely intensive and a lot of content will be introduced to you. All technologies outlined within are meant solely to provide a deeper understanding, of FAA rules and regulations. All content is aligned to FAA regulations.

This course does not guarantee students will pass their FAA 107 Certification exam

Unit 1:	Introduction to UAS/UAV and History
Unit 2:	Drone Theory & Aeronautical Basics, Flight Simulation
Unit 3:	Regulations & Operating Rules
Unit 4:	Airspace Classifications & Operating Requirements
Unit 5:	Aviation Weather, Effects & Sources
Unit 6:	sUAS Loading & Performance
Unit 7:	Emergency Flight Procedures
Unit 8:	Crew Resource Management (CRM)
Unit 9:	Radio Communications
Unit 10:	Airport Operations
Unit 11:	Maintenance & Inspection Procedures
Unit 12:	FAA Knowledge Test - Exam Prep

Course Goals / Objectives:

LA-933 Instructors are prepared to go the extra mile to bring students the real-world relevance that is so vital for a strong foundation in critical work shortage fields involving science, technology, engineering, art and math (STEAM). We adhere strongly to a research-based lesson cycle, and we required students to conduct their own investigations, draw their own insightful conclusions, and create their own persuasive analysis of many topics leading toward industry certification in high-demand STEAM fields.

DRONE curriculum meets the challenges today's schools are faced with solving. You will find a curriculum that captures students' interest and prepares them for FAA certification to legally fly drones for commercial purposes.

Students will be able to describe and think critically about topics integral to UAS operations including:

• Different types of UAS systems and how each type can be used;
• Components of both fixed-wing and multirotor sUAS systems;
• Differences between firmware, software, and hardware in a UAS system;
• Basics of flight with multirotors and fixed-wings;
• Federal Aviation Administration (FAA) requirements for UAS operations; and
• The multiple industries for which UAS' can be used to improve operational efficiency and which type of UAS system is best used for a specific industry.

Students will accumulate up to 20-25 hours of live flight time on multirotors. Students will accumulate up to 20-30 simulated flight hours on both fixed-wings and multirotor systems.

End of Course Exams (Final Exam)

All students in our Drone course will take the End of Course exam to determine if the District will be financially responsible for your Part 107 Drone pilot license test.

18 Weeks Grade:
60% Summatives/Uniform Wear
40% Formatives Quiz/PT
100% Total

Semester Grade:
A- 90-100
B-80-89
C-70-79
D-60-69
F-0-59

LATE WORK

This is an accelerated course. Assignment due dates are established. There will be a standard deduction of 10 point per class day for late work. It is important that you communicate any special circumstances regarding absences and late work to MSgts Lochren and Moll.

Test Retakes (excluding the Pre-part 107 exam)

If the student would like the opportunity to retake a failed test/assessment the student must:

1. Arrange with the instructor to receive remediation
2. Arrange with the instructor to re-test outside of class time within 3 class periods or by the end of a 18 week grading period.

When You Are Absent or Have Missing Assignments

It is your responsibility to let me know that you are in need of help. You must check and use Google Classroom (for Lesson Plans and files needed) to get caught up on any and all work you missed or are behind on. If you need help let me know otherwise you will need to make up the work on your own. Please keep in mind, this is a semester and this counts, as a whole school year course, so you get 1 whole credit for this class. It is your job to get the missing work done ASAP. Please don't miss if there is any way you can help it, because you are still responsible for the missed work and it is on you to get it done.

First-Time Pilots

To become a pilot you must:

- Be at least 16 years old
- Be able to read, speak, write, and understand English (exceptions may be made if the person is unable to meet one of these requirements for a medical reason, such as hearing impairment)
- Be in physical and mental condition to safely operate a small UAS
- Pass the initial aeronautical knowledge exam at an FAA-approved knowledge testing center

Pilot Certificate Requirements

- Must be easily accessible by the remote pilot during all UAS operations
- Valid for 2 years; certificate holders must pass a recurrent knowledge test every two years

Application Process

1. Schedule an appointment with a Knowledge Testing Center (KTC) (administer initial and recurrent FAA knowledge exams).

a. View the list of Knowledge Testing Centers (PDF) (https://www.faa.gov/training_testing/testing/media/test_centers.pdf) to find one near you
b. Applicants must bring government-issued photo ID to their test.

2. Pass the initial aeronautical knowledge test—initial knowledge test areas include:

a. Applicable regulations relating to small unmanned aircraft system rating privileges, limitations, and flight operation
b. Airspace classification and operating requirements, and flight restrictions affecting small unmanned aircraft operation
c. Aviation weather sources and effects of weather on small unmanned aircraft performance
d. Small unmanned aircraft loading and performance
e. Emergency procedures
f. Crew resource management
g. Radio communication procedures
h. Determining the performance of small unmanned aircraft
i. Physiological effects of drugs and alcohol
j. Aeronautical decision-making and judgment
k. Airport operations

Maintenance and preflight inspection procedures

3. Complete FAA Form 8710-13 for a remote pilot certificate (FAA Airman Certificate and/or Rating Application) using the electronic FAA Integrated Airman Certificate and/or Rating Application system (IACRA).*

a. Register using the FAA IACRA system (https://iacra.faa.gov/IACRA/Default.aspx).
b. Log in with username and password

c. Click on “Start New Application” and 1) Application Type: “Pilot” 2) Certifications: “Remote Pilot” 3) Other Path Information 4) Start Application
d. Follow application prompts.
e. When prompted, enter the 17-digit Knowledge Test Exam ID (NOTE: it may take up to 48 hours from the test date for the knowledge test to appear in IACRA)
f. Sign the application electronically and submit to the Registry for processing

4. A confirmation email will be sent when an applicant has completed the TSA security background check. This email will provide instructions for printing a copy of the temporary remote pilot certificate from IACRA.

5. A permanent remote pilot certificate will be sent via mail once all other FAA-internal processing is complete.

ACADEMIC HONESTY & INTEGRITY

Honesty is always the best policy. Please, give me NO reason to suspect any form of cheating on work that is done in this course. While working with others on projects and assignments are allowed & encouraged, copying all or any part of any assignment is cheating and will result in a zero for the assignment, parent contact, and a referral to your assistant principal (per Student Code of Conduct).

DISTRICT POLICIES – The student and parent must sign the computer rules policy provided by the St, Charles Parish School District. All district and campus policies will be followed and enforced in this classroom. .

UAV ETHICS PLEDGE

As a pilot of UAVs, I _____acknowledge that I have certain responsibilities to uphold.

I pledge to set a good example of safety, respect, and obedience to the law, and to conduct myself professionally and ethically.

Safety

I acknowledge that protecting the safety of others and myself involves always using best practices and being familiar with the regulations and laws.

I will follow all guidelines to ensure safe operation of the UAS within the National Airspace System, including respecting the safe flight ceiling (400 ft.) and Line of Sight practices when there are weather conditions that necessitate those practices.

I will never operate my UAV while under the influence of drugs or alcohol, and I will avoid using them.

I will maintain my equipment.

I will perform pre-flight procedures before all flights, including announcements to my audience/observers.

I will accept responsibility for making decisions consistent with the safety, health, and welfare of the public, and for promptly disclosing factors that might endanger the public or the environment.

Professionalism

I will obtain insurance for operating my UAV.

I will maintain appropriate drone registration.

I will disclose any mishaps/accidents immediately to the appropriate people.

I will assist colleagues in their professional development and support them in following this Ethics Pledge.

I will be responsible for staying current on the latest FAA guidelines.

Respect

I will respect others' privacy, show respect for public concerns, and support the education of the public.

I will avoid injuring others, their property, reputation, and/or employment by false or malicious action.

I will lead by example.

I _____hereby promise to uphold this UAV Ethics Pledge to the best of my ability.

_____ _____

Student's Signature Parent's Signature