**AVSC-1410 *Aeronautical Knowledge for Small Unmanned Aircraft Systems***

  Course Description

Prepares students with the aeronautical knowledge necessary to conduct or interact with Unmanned Aircraft Systems (UAS) operations within the National Airspace System (NAS). While this course is not focused on preparing students to pass the FAA part 107 Drone Pilot exam, it will provide all necessary knowledge.  Course content includes applicable regulations, airspace classification and operating requirements, effects of weather, loading and performance, communication and emergency procedures, physiological effects of drugs and alcohol, aeronautical decision-making and judgment and airport operations.

**This course must be successfully completed to fulfill graduation requirements for the UAS: Unmanned Aircraft Systems, Certificate of Proficiency.**

**This course is part of the UAS: Unmanned Aircraft Systems, Certificate of Proficiency requirements.**

  Course Outcomes

Upon successful completion of this course, students will be able to:

* Demonstrate knowledge relating to small unmanned aircraft system rating privileges, limitations and flight operations
* Demonstrate knowledge of airspace classification and operating requirements, obstacle clearance requirements and flight restrictions affecting small unmanned aircraft operations
* Utilize official sources of weather and explain effects on small unmanned aircraft performance
* Demonstrate knowledge of radio communication procedures and airport operations
* Demonstrate knowledge of performance limitations and emergency procedures for small unmanned aircraft operation
* Explain physiological effects of drugs and alcohol
* Demonstrate aeronautical decision-making and judgment, as well as airport operations

  Prerequisites and Needed Skills

There are no prerequisite courses, aviation ratings, or skills needed for this course.

Prior experience with unmanned aircraft systems (UAS) is not required.

  Materials, Fees and Technology Tools

2020 Remote Pilot Test Prep, Aviation Supplies & Academics, Inc. - ISBN 978-1-61954-796-4. Textbook can be found and purchased at the [UVU Bookstore. (Links to an external site.)](http://bookstore.uvu.edu/SelectTermDept.aspx) In addition, web browser compatibility can be found at [Canvas Questions and Answers (Links to an external site.)](https://community.canvaslms.com/docs/DOC-10720-67952720329). Internet browsers such as Google Chrome or Firefox are preferred.

Some course elements may be viewed on mobile devices; however, UVU aviation online courses include elements of instruction that may require the use of a computer.

**Fees:**

There are no additional fees associated with this course.  Taking the part 107 sUAS pilot certification exam is not a course requirement.  Students may take the FAA exam of their own volition with independent payment made to the testing center for the FAA fee of $150.

**Additional Resources:**

The world of UAS is evolving so quickly that many printed references become obsolete soon after publication.  There are multiple online resources that are updated consistently.  Students are encouraged to become familiar with online resources and their applicability to UAS aeronautical knowledge.  There are many to choose from but here are websites that will be referenced in this course.

* [**Aviation Weather Center (Links to an external site.)**](https://www.aviationweather.gov/)
* [**FlightService Weather Briefings (Links to an external site.)**](https://www.1800wxbrief.com/)
* [**Electronic Code of Federal Regulations (eCFR) (Links to an external site.)**](https://gov.ecfr.io/cgi-bin/ECFR)
* [**SkyVector Aeronautical Charts (Links to an external site.)**](https://skyvector.com/)
* [**FAA Safety Team (Links to an external site.)**](https://www.faasafety.gov/)
* [**ASA Preware (Links to an external site.)**](https://online.prepware.com/) (practice exams included with course text)
* [**King Schools (Links to an external site.)**](https://www.kingschools.com/free-faa-exam/drone-pilot) (free FAA part 107 pilot test practice)
* [**Drone Laws by State & Country  (Links to an external site.)**](https://uavcoach.com/drone-laws)

How This Course Works

**Course Mode:**

This is an online delivery course.  Visit the course Modules page to see the weekly content in the course structure.  Assigned work will be due at the end of each week indicated in the "Course Summary" timetable below.  This includes weekly due dates for all work to be turned in (writing, discussions, quiz, test, etc.).

**NOTE:  The "Course Summary" table at the below in the syllabus is for reference only. Your instructor many update any due dates or assignment changes. The course calendar is your best reference to ensure you do not miss work to be submitted each week.**

**NOTE:  All work to be turned in must be submitted by 11:59 PM MST/MDT on the date listed with the assignment/quiz.**

**Description of how course works:**

Canvas is where course content, grades, and communications will reside for this course.

There is one learning module per week for this course (see *Course Schedule* table below).  Students should complete each learning activity identified in the weekly module and submit assigned work per the scheduled due dates.  Some learning activities require significantly more time than others.  Students are **encouraged** to work ahead if possible to ensure they have the **necessary time** for completion of work and knowledge practice questions in the Remote Pilot Test Prep text.

Students should prepare to spend significant time studying aeronautical topics i.e. aviation weather, aeronautical charts, airspace, flight physiology, etc.  Even if students do not intend to take the FAA part 107 exam, taking multiple practice exams from the ASA and King School websites (see *Additional* *Resources* above) are very useful for learning how to apply this aeronautical knowledge for safe, lawful, and socially responsible UAS operations.

For this **three (3) credit-hour** course students should expect to spend up to**9+ hours a week** completing course activities.

**Student Responsibilities:**

* *Start class the first week of the term.*
* ***Be accountable by setting aside regular time each week to complete course activities and assignments on time as noted per the due dates****.*
* *Learn how to use Canvas including communication tools (e.g. discussion, Canvas inbox, etc.). If you have technology-related problems contact the*[*Service Desk (Links to an external site.)*](https://www.uvu.edu/servicedesk/)*.*
* *Abide by ethical standards. Your work must be your own.*
* *Contact your instructor as early as possible if an emergency arises. Do NOT wait until the last minute to ask for an extension.*

**Instructor Responsibilities:**

* *Respond to emails within ONE business day. If multiple emails are received regarding the same question or concern, they may be responded to with an announcement to the entire class.*
* *Provide timely, meaningful and constructive feedback on assignments.*
* *Facilitate an effective learning experience.*
* *Refer students to appropriate services for issues that are non-course content specific. For instance, technical issue, writing labs, accessibility services, etc.*
* *Mentor students through the course.*

 Grading and Late Work Statement

**Grading Scale:**

The following grading standards will be used in this class:

| **Grade** | **Percent** |
| --- | --- |
| A | 94-100 |
| A- | 90-93 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-69 |
| D | 63-66 |
| D- | 60-62 |
| E | 0-59 |

**Assignment Categories**

| **Activity** | **Point** |
| --- | --- |
| Assignments | 10 @ 50 pts/each  = 500 pts total |
| Discussions | 1 @ 30 pts/each  2 @ 45 pts/each  = 120 pts total |
| Quizzes | 6 @ 10 pts/each  =60 pts total |
| Exams | 2 @ 60 pts/each  =120 pts total |
| Faa Exam | 2 @ 10 pts/each  =20 pts total |
| Final Flight Plan | 1 @ 130 pts  =130 total |
| **Course Total** | **950** |

**Late Work Statement:**

Students may complete modules days or weeks ahead of the assigned schedule in this course.  Students should budget their time to account for modules that take longer than others to compete.  **Communicating** with the instructor **ahead** of assigned due dates is paramount for considering extended due dates.  This will only be considered in case of unforeseeable and significant extenuating circumstances.

**Late assignments will not be accepted!**

 Assignment and Assessment Descriptions

**Assignments:**

You will be required to complete written assignments throughout this course.  It will be to your advantage to review the assignment well before the week it is due.  The assignments are spaced to help you pace yourself throughout the semester.  Instructions and grading rubrics are found in the assignment descriptions in Canvas.   Assignments need to be submitted in Microsoft Word or other word processing file formats such as Adobe PDF.   Assignments cannot be handwritten.   A video on how to submit Assignments in Canvas can be found in [the Canvas Student Guide.](https://mediafiles.uvu.edu/common/student_guide/index_url.html?page=page1)

Assignments should be written in the student's own words with moderate use of referenced materials which must be cited to give proper credit to the author or source.  All writing assignments will be automatically be reviewed by the UniCheck: Plagiarism Checker and Originality Detector.  Student submissions should strive for less than 30% UniCheck score.  Scores higher than this will be reviewed by the instructor and may receive a zero grade.

**Discussions:**

Discussion posting provide opportunities to explore topics together.  Posts to the discussion should add significantly to the conversation and support your point of view.  You are welcome to contribute to other student's postings if you have incite specific to that topic.  It is okay to disagree with others in a discussion.  In fact much learning happens when we disagree.  However, all postings need to be professional and respectful of others.  As if you were politely showing an alternative point of view in a job interview.

**Assessments:**

Quizzes in this course will provide objective assessment of the student's learning.

**Final Paper:**

The Final Flight Plan writing assignment will cover material from the entire course and will be worth 200 points.  This written plan will be in lieu of a final exam.  The objective of this plan is to combine the aeronautical knowledge learned, in a manner that would provide a UAS pilot or organization to assess whether proposed flights are safe, lawful, and socially responsible.

 Course Schedule

Refer to the [**Course Schedule Canvas page**](https://uvu.instructure.com/courses/518803/pages/course-schedule)**.**

 UVU Policies and Resources

[Policies and Success Strategies (Links to an external site.)](https://greengold.uvu.edu/_crs_info_master/success.html)

[Accessibility Services](https://www.uvu.edu/accessibility-services/students/)

* Students who need accommodations because of a disability may contact the UVU Office of Accessibility Services (OAS), located on the Orem Campus in LC 312. To schedule an appointment or to speak with a counselor, call the OAS office at 801-863-8747. Deaf/Hard of Hearing individuals, email nicole.hemmingsen@uvu.edu or text 385-208-2677.

[Campus Resources (Links to an external site.)](https://www.uvu.edu/otl/students/campus_resources.html)

  Technology Support Services

 For 24/7  technical support contact [Instructure's Canvas Support Live Chat  (Links to an external site.)](https://cases.canvaslms.com/liveagentchat?chattype=student&sfid=001A00000085cNxIAI)

(385) 204-4930 (Available 24/7)