

Geography 38:398
Applied Topics in Geography: UAV Pilot Ground School
Term 2, 2017-18

Instructor: Mr. Matthew D. G. Johnson, M3 Aerial Productions
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Textbook: *UAV Systems in Industry*, M3Aerial Productions, 2017.
Course Fees: \$60 covers course textbook and all other handouts.

Course Description

This course is designed for new or experienced unmanned air vehicle (UAV) operators who are now required to complete a UAV pilot ground school under Transport Canada Regulations. The course covers the mandatory Transport Canada learning outcomes described in TP 15263: *Knowledge Requirements for Pilots of Unmanned Air Vehicle Systems (UAV) 25 kg or Less, Operating within Visual Line of Sight*. It includes a comprehensive review of the rules and regulations governing the operation of UAVs for commercial and research purposes and other content that every UAV operator should know prior to piloting an aircraft or applying for a Special Flight Operations Certificate (SFOC). The course instructor is registered with Transport Canada as a UAV ground school instructor and is an experienced UAV pilot and trainer. Upon successful completion of the course you will receive a certificate of completion recognized by Transport Canada and transfer credit for the course to your home institution, where applicable.

Course Outline

Part 1 - Individual Online Study, approx. 20 - 30 hrs. (Jan 3 – March 2, 2018)

Course content in this section covers the mandatory Transport Canada learning outcomes described in *TP 15263 "Knowledge Requirements for Pilots of Unmanned Air Vehicle Systems"*. Course material is presented in a series of online presentations and instructional videos with each unit culminating in an exam that is also completed online. The learning outcomes covered in this section are as follows:

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| <ul style="list-style-type: none">• Canadian Aviation Regulations• Flight and Aerodynamic Theory• Aeronautical Safety• Meteorology• Aerodromes and Airports• Operating and Flight Rules• Maps and Charts• Air Law | <ul style="list-style-type: none">• Radio Theory• Flight Operations• Pre-flight Planning• Pilot Navigation• Dealing with Emergencies• Weather Constraints• Human Factors• Pilot Discipline |
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Part 2 - Classroom Instruction, approx. 18 hrs. (Saturday and Sunday, March 3rd & 4th, 9 am to 3 pm, Monday and Wednesday, March 5th and 7th, 6 – 9 pm)

This section of the course will be delivered in person at Brandon University by the course instructor with an option to participate via distance delivery. The in-class sessions will also be recorded and made available for later viewing if you are unable to attend in person or online at the scheduled times. At the conclusion of this section, a comprehensive final exam will cover both Parts 1 and 2 of the course. This section will focus on the following learning outcomes:

- Communicating with NAV CANADA
- Understanding Aeronautical Charts
- Mission Planning
- Airspace Recognition
- Essentials of Meteorology
- Regulations and Safety
- SFOC Application Process
- Insurance Requirements
- Radio Procedures
- Experiential Scenario Analyses

Exam Format

All exams are multiple choice. A minimum passing grade of 60% must be achieved on all unit exams within Part 1. Exams in Part 1 may be attempted multiple times. You will only be allowed to proceed to the next online unit when the previous unit exam is passed.

The final exam is comprehensive and consists of 60 multiple choice questions. The final exam is also completed online and you will have one hour to write the exam. BU students will write the exam on campus in the geomatics lab on Friday, March 9th at a time to be determined. All off campus students will have a 24 hr. window from 6 pm Thursday, March 8th to 6 pm Friday, March 9th in which to login and write the exam from home. A minimum passing grade of 60% must be achieved on the final exam to receive course credit and the certificate of completion. The final exam may be retaken only once. The course is graded on a pass/fail basis.

Course Policies

All units within Part 1 must be completed prior to the commencement of Part 2. Upon successful completion of the course a certificate of completion, recognized by Transport Canada, will be awarded to each student. Visiting students may arrange to transfer the course credit to their home institutions.