



Category:	Health and Safety
Parent Policy:	Health and Safety Policy
Last Reviewed:	January 17, 2020
SOP Owner:	Institutional Compliance

FLYING A DRONE

Purpose: to ensure the safety of drone pilots, drone crew members, and bystanders; to mitigate risk for the College.

Scope and limits: applies to every person flying a drone (i.e. pilots) or assisting in its operation (i.e. crew members) on College business. The term "drone" refers to any remotely piloted aircraft.

Definitions in addition to / different than those in the parent policy:

CLC means College Leadership Council.

STANDARD OPERATING PROCEDURE

Relevant sections of the *Canadian Aviation Regulations* are in square brackets []. This Standard Operating Procedure is not a substitute for the *Canadian Aviation Regulations*.

1. Drones flown on College business:
 - a) must be marked and registered in accordance with *Canadian Aviation Regulations*;
 - *Each department is responsible for registering the drones that they own, using the college's Transport Canada RPAS account and login information available from Institutional Compliance.*
 - b) must be owned, leased or rented by the College; and
 - c) must not weigh more than 25 kilograms [903.01].
2. A person may only fly a drone or assist in its operation on College business:
 - a) for research, education or training purposes;
 - b) if the person has a valid drone pilot certificate (in the case of a pilot) or is accompanied by someone who has a valid drone pilot certificate (in the case of a crew member);

- c) if the person has been authorized to do so by the person's supervisor at the CLC level and, if the drone will be flown inside a College building, by Occupational Health and Safety;
 - *Authorization need not be written. It is each person's responsibility to obtain authorization. Members of the CLC are deemed to be authorized to fly a drone or assist in its operation on College business provided that they meet all other requirements of this Standard Operating Procedure, including the requirement for authorization from Occupational Health and Safety if the drone will be flown inside a College building.*
 - d) if the person has submitted to Institutional Compliance a Pilot / Crew Member Declaration; and
 - e) if the person complies with all applicable laws, regulations, and College policies.
 - *For example, municipal bylaws, Canadian Aviation Regulations, the Trespass to Premises Act (Alberta), and Criminal Code provisions relating to voyeurism, mischief and creating a nuisance. The Freedom of Information and Protection of Privacy Act (Alberta) may apply if personal information is being collected by the drone. The College's research policies may also apply.*
3. It is each person's responsibility to advise Institutional Compliance and, if applicable, their supervisor at the CLC level of any changes to their Pilot / Crew Member Declaration or if their drone pilot certificate is suspended, cancelled or allowed to expire.
 4. During a drone operation, the pilot and all crew members must have the following on their person or immediately available to them [901.23, 901.30]:
 - a) their drone pilot certificate (in the case of a pilot);
 - b) proof of completion of all recent exams, flight reviews or training activities in which they participated;
 - c) any special flight operations certificate required for the operation;
 - d) any proof of authorization from NAV CANADA required for the operation;
 - e) their Pilot / Crew Member Declaration;
 - f) proof of insurance provided by Institutional Compliance;
 - g) the manufacturer's operating manual for the drone; and
 - h) normal operating procedures and emergency procedures.
 5. A person must not fly a drone or assist in its operation on College business [901.19]:

- a) if the person is suffering from or is likely to suffer from fatigue;
 - b) within 12 hours after consuming an alcoholic beverage;
 - c) while using any drug that impairs the person's faculties to the extent that aviation safety or the safety of any person is endangered or is likely to be endangered; or
 - d) if the person is otherwise unfit to perform their duties properly.
6. Before every drone flight, a pilot must complete a Drone Flight Checklist to [901.23, 901.28, 901.29]:
- a) ensure that the drone is serviceable and has been maintained in accordance with the manufacturer's instructions;
 - b) ensure that all equipment to be used with the drone is installed and serviceable;
 - c) ensure that there is sufficient fuel or energy to safely complete the flight;
 - d) ensure that all crew members have been instructed as to their duties and the location and use of any emergency equipment associated with the flight;
 - e) ensure that all crew members have reviewed the normal operating procedures and emergency procedures; and
 - f) determine the maximum distance from the pilot that the drone can travel without endangering aviation safety or the safety of any person.
7. Before every drone operation (e.g. take-off, launch, approach, landing or recovery), a pilot must determine that the site is suitable for the proposed operation by conducting a site survey in accordance with sections 901.27 and 901.33 of the *Canadian Aviation Regulations*. Subsections 901.27(b) through (g) do not apply to indoor drone operations.
8. A person must not fly a drone:
- a) in such a reckless or negligent manner as to endanger or be likely to endanger aviation safety or the safety of any person [900.06];
 - b) beyond their visual line-of-sight [901.11];
 - c) over or within the security perimeter established by a public authority in response to an emergency [901.12];
 - d) outside of Canadian domestic airspace [901.13] or in restricted airspace [901.14];
 - e) if aviation safety or the safety of any person is endangered or likely to be endangered [901.16];

- f) near any other aircraft (including other drones) – a pilot must give way to other aircraft [901.17];
 - g) in such proximity to another aircraft as to create a risk of collision [901.18];
 - h) if visual observers are used to assist the pilot unless reliable and timely communication is maintained between the pilot and each visual observer [901.20];
 - i) more than 400 feet (122 metres) above ground level [901.25];
 - *However, if the drone is being operated at a distance of less than 200 feet (61 metres), measured horizontally, from a building or structure, a pilot may fly the drone up to 100 feet (30 metres) above that building or structure. A drone flight outside of this rule requires a special flight operations certificate.*
 - j) within 100 feet (30 metres) of a bystander, measured horizontally and at any altitude [901.26];
 - *A pilot may fly a drone within 100 feet (30 metres) but not less than 16.4 feet (5 metres) of a bystander if the pilot has an advanced drone pilot certificate. Crew members are not considered bystanders.*
 - k) except in accordance with the manufacturer's instructions [901.31];
 - l) if icing conditions are observed, are reported to exist or are likely to be encountered, or if there is frost, ice or snow on the drone [901.35];
 - m) while operating a moving vehicle or vessel [901.37];
 - n) at night [901.39];
 - o) at an outdoor event that is advertised to the general public [901.41];
 - p) at or near an aerodrome in a manner that could interfere with an aircraft operating in the established flight pattern [901.47];
 - q) within three nautical miles (5.6 kilometres) of an airport or one nautical mile (1.9 kilometres) of a heliport unless the pilot has an advanced drone pilot certificate and pilots the drone in accordance with the airport or heliport's established procedure [901.62, 901.73]; or
 - *The College's Lethbridge campus is within three nautical miles of an airport.*
 - r) in controlled airspace unless the pilot has an advanced drone pilot certificate and authorization from NAV CANADA [901.71].
9. A pilot must keep a record of the name of the pilot and crew members involved in a flight, the time of the flight, and the details of any mandatory action, maintenance action, modification, repair, incident or accident in accordance with sections 901.48 and 901.49 of

the *Canadian Aviation Regulations*, using a Drone Flight Checklist and Log. Records must be kept for 24 months.

10. A pilot or crew member is personally responsible to pay any fines and penalties incurred by that pilot or crew member in the course of flying a drone or assisting in its operation on College business. The College will not reimburse or compensate pilots or crew members for fines or penalties.