# UTA LIBRARIES DRONE LENDING PROGRAM

ELO/UTA Maker Club Partnership

## ABOUT

The Drone Lending Program is being created as a partnership between UTA Libraries Experiential Learning and Outreach Department (ELO) the UTA Maker Club to provide the necessary structure to allow students to borrow Drones for recreational purposes.

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# PROGRAM OVERVIEW

Drones are increasingly becoming part of everyday life, used in research, transportation, the arts, engineering, news reporting, law enforcement, entertainment, and much more. Drone piloting experience, as well as skills with onboard technologies like sensors and cameras, will become ever more in-demand as new possibilities for drone use emerge in the marketplace.

University Libraries are exploring new ways to integrate drones into campus life and are considering possibilities for students, teachers and staff on campus to gain experience with drone piloting. Here at the UTA Libraries we want to be on the forefront of making drones accessible to students, especially those who would not normally have access otherwise. Through our lending program students can borrow drones for recreational purposes and gain experience piloting them. Various applications for drones are still being discovered and this program will inspire students to create new ideas and ways to use this emerging and developing technology.

Any UTA or UT System policies and regulations supersede the UTA Libraries' Drone Lending Program policy. This policy is subject to change at any time, as FAA and UTA policies are under continual review and modification.

## TERMINOLOGY

### Definitions

"Drone" is an umbrella term for any "quadcopters" or "hobby planes" discussed herein.

"Controller" is the umbrella term for the Radio Controlled (RC) Controller used to control drone flight. Also called a "radio controller" or sometimes "transmitter".

"Flight Controller" is the umbrella term for the onboard hardware that interprets input from the Radio Controller and converts the data into digital instructions that the drones "brain" uses to execute commands.

"User" is the term given to any UTA Affiliate (Student, Staff, and/or Faculty) able to borrow technology from the Library.

"ELO" is the abbreviation for the UTA Libraries Experiential Learning and Outreach Department.

### Drone Use Classification

For the intents and purposes of UTA Libraries' Drone Lending Program, we focus only on what the Federal Aviation Administration (FAA) classifies as "recreational flying". This classification allows us to lend drones that are under 55 pounds, used only for hobby and recreational purposes, and follow the proper flight requirements for recreational flyers outlined by the FAA and included in this document. UTA Libraries does not lend drones for non-recreational purposes, including for commercial purposes or any UTA-related research purposes.

The FAA presently defines "Educational purposes" very broadly, where certain uses may fall into either the "recreational" or the "research" categories. There is a statutory provision (PL 115-254, Section 350) for Institutions of Higher Education that distinguishes some educational and research uses of drones by institutions of higher education as recreational in nature. UTA Libraries expects and hopes that drone borrowers will learn through their recreational engagement with the drones, but we do not authorize borrowers to use the drones for any "official" UTA research. However, we do authorize use of drones for completion of individual and group course projects and assignments, when warranted. We will consider these on a case-by-case basis.

# DRONE LENDING PROCESS

## VALIDATING STUDENT ELIGIBILITY

Students will need the following to be eligible to borrow drones from UTA Libraries:

- Tech Lending Service Agreement
- Drone Lending Service Agreement
- UTA Drone Safety Training
    - Situational awareness and personal protective equipment
    - Locating a legal place to fly using B4UFLY and LAANC
    - Regulations for Recreational Flyers
    - Preflight checklist
- UTA Drone Flight Training

We will add students' training expiration dates and any other relevant details to students' Alma accounts.

Per FAA requirements, students are required to complete basic safety and flight training sessions, offered by UTA Libraries.  Users are required to possess, any time they are flying a UTA Libraries drone, a copy of UTA Libraries' drone safety policy, as outlined in this document.

## LENGTH OF TIME

Students will be able to borrow Drones in 7-day increments.

# ELO RESPONSIBILITIES

## ALMA

ELO will catalog the Drones into Alma. The records will include a parts list for each drone and controller, including batteries, carrying cases, spare propellers, and any other parts included with the drone.

### Record Keeping

ELO will manage Users' Tech Lending Agreements, Drone Lending Agreements, and any necessary training records.

## SERVICE POINT/LENDING PROCEDURES

### Pre-Checkout Process

Staff member has the User sign the Tech Lending Agreement, if not already on file. The borrower will also fill out copies of the Drone Lending Application and Drone Lending Agreement forms. The User will submit the Drone Lending Application, Drone Lending Agreement, proof of UTA safety and flight training, and any other necessary documentation to ELO Staff for review and approval before the User can borrow drones. Because approvals are based on the schedule and availability of ELO staff, Users should not expect to borrow the drone on the same day that they complete their safety and flight training. Users should allow at least three business days for approval.

### Checkout Process

Once ELO Staff notifies the User that their application is approved, the User is eligible to borrow Drones. ELO Staff will verify the Users' drone lending eligibility by reviewing the 'Notes' section of the Users' account in Alma.

Once eligibility is verified, the process for lending drones is the same as any other technology.

1. Verify the student their valid Student ID.
    a. The student must have their Student ID to checkout any technology.
2. Scan the barcodes on each item they are checking out.
3. Notify User of return date.

### Return Process

The return process for drones is the same as the process for other lendable technology:

1. Ensure all pieces are present using the parts list in the item's catalog record. Parts may include battery, extra propellers, removable propeller guards, User manuals, controllers, and cameras, etc.
2. Inspect equipment for physical damage.
    a. It is imperative that everything be checked for any physical damage (i.e., broken propellers, cracked body, missing pieces, etc.)
        i. If anything is damaged…
            1. Please record the Student ID# when the item(s) are scanned and checked into Alma.
            2. Notify the required ELO Staff immediately via email, noting the damage and include the Student ID#.

            3. Place all the items back into the protective travel case.

4.	Place the entire Protective travel case into the damaged tech bin.
3.	If nothing is damaged…
a.	Scan in the items in Alma for check in.
b.	Place the items back into their proper storage locations.

## PROCESSING DAMAGED AND LOST ITEMS
ELO Staff will process any damages or lost items as is already procedure for other tech lending items.

## DAMAGED ITEM POLICY
### Maker Club Owned Equipment
When a damaged item is reported, the ELO Staff will collect the damaged item(s) and report it to the Maker Club liaison for inspection. Once the damage has been accessed by the Maker Club, the Maker Club will then report the amount it will cost to repair the damages. That amount will then be charged to the student responsible for the damages. The Maker Club is responsible for any repairs to be made to Maker Club owned drones and/or other equipment.

### ELO Owned Equipment
When a damaged item is reported, the ELO Staff will collect the damaged item(s) and inspect it. Once the damage has been accessed, the student will be notified of the amount it will cost to repair the damages or replace the item.

### Lost Item Policy
The Tech Pre-Billing Process for drones, and peripheral equipment, will begin two (2) days after the due date. Items are considered "lost" once it is fourteen (14) days overdue. The User will be charged the Overdue Fine, a $35.00 Processing Fee, and the Replacement cost per item lost.

### Fee Schedule
Overdue Fines per Item
- Drone and Accesories $15.00 per day
- Maximum Overdue Fine $60.00

Replacement Costs per Item
Drone and Accessories
- Up to $1500.00
Remote Controller
- Up to $400.00

# MAKER CLUB RESPONSIBILITIES

## Drone Supply

Some drones will be created by the UTA Libraries Maker Club. Once completed, those drones will be put into circulation for student lending.

## Repair and Maintenance

The Maker Club would only be responsible for drones built or purchased by the club. Any drone purchases made by ELO would be the sole responsibility of ELO to repair and maintain.

## Damaged Items

### Maker Club Equipment

The Maker Club will be responsible for assessing damages and reporting a list of damaged components and cost to the ELO Staff, who will then transfer those charges to the appropriate User that damaged the item(s). The same process applies to Drones and Remote Controllers labelled as "Damaged and Not Salvageable," which will be treated as "lost".

### ELO Equipment

ELO will be responsible for assessing damages to equipment purchased by the department. ELO Staff will transfer charges to the appropriate User that damaged the item(s). The same process applies to Drones and Accessories considered "Destroyed" which will be treated as "lost" from a fee's standpoint.

## Regular Maintenance and Upgrades

### Maker Club Equipment

Drones may be periodically taken out of service, so the Maker Club can do regular maintenance and hardware and/or software upgrades. If possible, this will be done one at a time to ensure we still have drones in circulation. A member of the Maker Club will retrieve the drone after the ELO Staff has been notified to ensure proper adjustments are made in Alma. Before placing the drone back in circulation, ELO Staff will make the necessary adjustments in Alma records.

### Regular Maintenance and Upgrades: ELO Equipment

Drones may be periodically taken out of service for regular maintenance and hardware and/or software upgrades. If possible, this will be done one at a time to ensure we can still have drones in circulation. ELO Staff will ensure proper adjustments are made in Alma before removing and after returning any equipment.

## UAV Registration

The Maker Club is responsible for ensuring proper registration of drones per FAA and University Guidelines.

## Developing Certification/Training Courses

The Maker Club will be responsible for developing and holding safety and flight training workshops for potential borrowers and any other UTA-affiliated faculty, staff or students. Students are not eligible to borrow any drones that they have not had proper training. Records will be kept of who has received training for each item and shared with the ELO Staff for lending validation purposes.

# FUNDING/PURCHASING

## Funding

Currently, the Maker Club has recurring funds to purchase parts necessary to make repairs and build two (2) additional drones per year. Newly built drones will be added to the lending program as they become available.

ELO provides funds for technology lending. Technology lending purchases are based on need, demand, and available funds, and weighed with other technology lending needs such as laptops. ELO has purchased a variety of inexpensive ready-to-fly drones and one high-end professional quality drone for lending and will purchase additional drones if the demand justifies it.

## Fines and Fees Allocation

TBD by ELO and LST Dept heads and Library Administration.

# RECREATIONAL FLYER RULES AND REGULATIONS

## State & Federal Regulations

Recreational Flyers & Modeler Community-Based Organizations
https://www.faa.gov/uas/recreational_fliers/

Texas Government Code Chapter 423 Use of Unmanned Aircraft
https://statutes.capitol.texas.gov/Docs/GV/htm/GV.423.htm

Federal Aviation Administration DroneZone
https://faadronezone.faa.gov/#/

UT System Regents' Rule 80107 - Filming Motion Pictures or Television Productions
https://www.utsystem.edu/sites/default/files/offices/board-of-regents/rules-regulations/80000-facilities_6.pdf

## UTA Policy

- Unmanned Aerial Vehicle Operation Policy (pending)
- Unmanned Aerial Vehicle Operation Procedure (pending)
- Unmanned Aerial Vehicle Operation Request Form (pending)

### Insurance Requirements

The insurance requirements associated with use of UAV on University property and off-campus will be determined by Environmental Health and Safety, in consultation with UT System Risk Management.

### Responsibility for Damage and/or Violation of Policy

Approved applicants will be responsible for any damage resulting from their use of a UAV and for any activity considered to be illegal or in violation of U.T. System or UTA policy.  University employees in violation of this policy are subject to disciplinary action up to and including termination.  UTA students who violate this policy are subject to disciplinary action up to and including expulsion.  Visitors and other third parties in violation of this policy will be considered trespassers and will be subject to available actions including removal from the campus, arrest, and prosecution.

It is the borrower's responsibility to read and understand the FAA Regulations for Recreational Flyers outlined within this policy and available on the FAA website at https://www.faa.gov/uas/recreational_fliers/. This material is covered in UTA Libraries' drone safety training sessions, as well as other drone safety training programs.

Per the UTA HOUSING HANDBOOK for Apartments & Houses 2020-2021:" Residents are not allowed to possess or operate drones on campus."

### Videography, Photography, and Recording

Activities that involve videography, photography or recording may require additional approval from the Office of the President and may be subject to an export review.

For more information and release forms, see the "Release, Waiver and Indemnity Agreement".

### UTA Designated Safe Fly Zones

Once the UTA Unmanned Aerial Vehicle Operation Policy & Procedure is finalized, it will include designated "safe fly" zones that drones can be flown in. High traffic and sensitive areas, such as the Library Mall and dorms,

will be strictly No Drone Zones. Library staff may not offer suggestions for areas to fly that are not listed in this policy. At the time of this writing, UTA offers four authorized fly zones:

- The UTA Ballpark, on the corner of Park Row and Fielder, available whenever there is not another event taking place
- The Maverick Activity Center's (MAC) indoor soccer court, available by appointment and during UTA Libraries Maker Club drone flying meetings
- College Park Center, indoor flying, by appointment only. This is for pilots holding part 107 certification or greater pilots license. UTA Libraries safety and flight training do not qualify.
- University of Texas at Arlington Research Institute (UTARI), 7300 Jack Newell Boulevard South, Fort Worth. Outdoor, netted, drone flying facility. Available by appointment only to UTA community.

FAA does not regulate any enclosed structure, only outdoor airspace. In addition to all other enclosed structures, structures with a simple barrier, such as netting, between the top of the structure and the open sky do not fall under FAA regulations. Borrowers are responsible for knowing where they are allowed to fly outdoors, and to gain permission to fly in indoor structures not under their own dominion.

## FAA Requirements
### Drone Registration
The FAA requires recreational flyers to:

1. Register the drone before flying.
2. Label the drone with a registration number.
3. Registration costs $5 per aircraft and is valid for 3 years.

ELO is responsible for registering each of its drones prior to making them available for lending. The Maker Club is responsible for registering the drones that it purchases or builds prior to making them available for lending.

 (See also, Maker Club Responsibilities)

### Regulations for Recreational Flyers
There's a law (PDF) that describes how, when, and where you can fly drones for recreational purposes. You are considered a recreational User if you fly your drone for fun. It is important to know when and where you can fly and how to register your drone.

**Following these rules will keep you and your drone safe and will help keep the airspace available to everyone.**

1. Register your drone, mark (PDF) it on the outside with the registration number and carry proof of registration with you.
2. Fly only for recreational purposes.
3. Fly your drone at or below 400 feet above the ground when in uncontrolled (Class G) airspace.


4. Obtain authorization before flying in controlled airspace (Class B, C, D, and E). You can obtain authorization in three ways:
   1. LAANC
   2. DroneZone

3. A written agreement with the FAA for fixed flying sites. For more information about fixed flying sites, contact us at UAShelp@faa.gov.

NOTE: Flying drones in certain airspace is not allowed. Classes of airspace and flying restrictions can be found on our B4UFLY app.

6. Keep your drone within your visual line of sight, or within the visual line-of-sight of a visual observer who is co-located (physically next to) and in direct communication with you.
7. Do not fly at night unless your drone has lighting that allows you to know its location and orientation at all times.
8. Give way to and do not interfere with manned aircraft.
9. Never fly over any person or moving vehicle.
10. Never interfere with emergency response activities such as disaster relief, any type of accident response, law enforcement activities, firefighting, or hurricane recovery efforts.
11. Never fly under the influence of drugs or alcohol. Many over-the-counter medications have side effects that could impact your ability to safely operate your drone.
12. Do not operate your drone in a careless or reckless manner.

Recreational flyers should know that if they intentionally violate any of these safety requirements, and/or operate in a careless or reckless manner, they could be liable for criminal and/or civil penalties.

For more information, read Advisory Circular 91-57B.

# UTA REQUIREMENTS

In addition to abiding by all Applicable Laws, all UAS operators on UTA's campus must comply with the following:

- No operator may fly a UAV over another human being unless that human being is adequately protected by a shelter capable of providing reasonable protection from the UAV should it fall.
- No operator may fly a UAV over moving vehicles, including on roads and in parking lots.
- No operator may fly a UAV inside of any UTA owned or controlled building (with the exception of the Safe Fly Zones identified in this Policy) without prior approval.
- No operator may fly a UAV from a vehicle, moving or stationary.
- No operator may fly a UAV so close to another UAV that it creates a collision hazard or in any negligent or reckless manner.
- No operator may fly a UAV in a manner that captures an unlawful image of another person or another person's private property (refer to Tex. Govt. Code Ch. 423).

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