



UConn 4-H Adventures in STEM
Saturday, November 5, 2022
University of Connecticut, Storrs Campus
Registration Form



This year a separate junior track is open to youth ages 7-11. They will rotate through five 30-minute activities in the morning and their day will end at 12:00 noon. Lunch is on your own. They do not need to select workshops. Cost of participation for junior members is \$10. Parent/guardian is welcome to stay and observe activities or drop off child and return for pick-up. (See full schedule and workshop descriptions below)

Youth ages 12-19 will select workshops included in the registration form and participate in a full day of workshops. Lunch in a university dining hall is included in this track. Cost for senior members is \$20.

Please return registration form by Wednesday, November 2nd to Nancy Wilhelm, 1376 Storrs Road, Unit 4134, Storrs, CT 06269-4134. **Include registration fee for each participant. Make checks payable to UConn.** Adults participating in senior workshops and lunch must also register and pay the registration fee. If you have any questions, please contact Nancy Wilhelm at 860-486-4127 or nancy.wilhelm@uconn.edu. Registration fee is non-refundable. If you wish to pay with a credit card, please visit <https://s.uconn.edu/4hstemconference>

Name _____

Street _____

Town _____ State _____ Zip _____

Telephone _____ 4-H Member _____ Non 4-H Member _____

Age _____ Junior Participant _____ Senior Participant _____

Participant Email Address _____ Parent Email Address _____

If a parent or guardian will not be accompanying a youth participant to 4-H Adventures in STEM, the youth participant must submit a 4-H member/volunteer health form and pick up-drop off form with their registration. If another adult is chaperoning, they must keep the health form for each participating youth in their possession. The health form must be signed by the youth's parent or guardian. Non 4-H members must complete a 4-H code of conduct form. Lunch will be provided in a University Dining Hall which offers a wide variety of choices. Meal cards will be provided at registration. Lunch is included in the registration fee.

List below your 1st and 2nd choices for workshops you would like to attend

	SESSION A	SESSION B	SESSION C	SESSION D
1 st Choice				
2 nd Choice				

See attached sheet for workshop descriptions

If you have any special dietary needs, or if special accommodations are needed, please indicate in writing. Requests for special accommodations should be submitted at least two weeks prior to the event.

2022 UConn 4-H Adventures in STEM Senior Workshop Descriptions and Schedule

8:30-9:00 am – Registration, W. B. Young Building, Room 100

9:00 am - Announcements

Session A (9:30-10:30 am)

Drones: In this 2-hour workshop, participants will be exposed to state-of-the-art drones and sensors that are used in environmental monitoring research. The science and engineering concepts behind different types of drones and various imaging and laser scanning sensors will be explained. If weather permitting, there will be a hands-on session and an outdoor demonstration of drone data acquisitions with different sensors.

DNA of Fruit: This workshop will introduce basic concepts of biology with household materials. The goal is for participants to extract the DNA from a strawberry. This concept can be used in many different science fields, such as agricultural biotechnology, forensic, genomics, and animal sciences.

Foxhunting with Amateur Radio: Radio direction finding uses a directional antenna and receiver to locate hidden, low-power transmitters. This is known as a foxhunt by amateur radio operators. Licensed amateur operators will assist with the workshop. Participants will learn about the radio frequency signals, attenuation of the signals, harmonics, and directional antennas. This workshop will take place outside so please dress appropriately.

Fun with Chemistry: Two experiments will be conducted during this workshop. The first experiment will be elephant toothpaste and will include discussion on the chemical equation, how a catalyst works, and acid/base chemistry. The second experiment will be paper making. Green chemistry and how cellulose must be broken down and mixed with water will be discussed. The bleaching process to make the paper white will also be covered. The last side demo will be a safe dry ice launcher where dry ice tablets and a test tube to build up gas ($PV=nRT$) are used and pop out the stopper.

Reach for the Stars! Fun Topics in Astronomy and a Brief Exploration of Careers in All Things Astro: This workshop will focus on several special topics in astronomy such as black holes, quasars and time differential in space, etc. The workshop will also dive into careers in the fields of astrobiology, astrophysics and engineering. Several demonstrations will be conducted to show that a career in microbiology can translate to astrobiology and that currently, NASA is recruiting astro-microbiologists for studies and internships.

Hydroponic Gardening: In this workshop participants will discuss the importance of eating fruits and vegetables and how they can be grown in hydroponic gardens. Participants will learn about both large-scale and at home hydroponic gardening and will make their own mini hydroponic garden to take home.

SESSION B (10:45-11:45 am)

Drones: This is a 2-hour workshop continued from session A. If you have selected this workshop in session A you need to select it in session B as well.

Foxhunting with Amateur Radio: See session A workshop description.

Fun with Chemistry!: See session A workshop description.

Reach for the Stars! Fun Topics in Astronomy and a Brief Exploration of Careers in All Things Astro: See Session A workshop description.

Hydroponic Gardening: See session A workshop description.

Lunch (12:00 – 12:45 pm) – Northwest Dining Hall

Session C (1:00-2:00 pm)

Cognitive Computing: In this workshop participants will be introduced to hyperdimensional cognitive computing that redesigns algorithms using strategies that more closely model the human brain. Hyperdimensional cognitive computing mimics several important functionalities of the human memory model with vector operations, which are computationally tractable and mathematically rigorous in describing human cognition. Participants will use common game board pieces to learn about these concepts.

DNA and the Replication Process: Participants will learn about DNA replication which is the process by which a double-stranded DNA molecule is copied to produce two identical DNA molecules. Replication is an essential process because, whenever a cell divides, the two new daughter cells must contain the same genetic information, or DNA, as the parent cell. The workshop will conclude with a strawberry DNA demonstration.

Foxhunting with Amateur Radio: See session A workshop description.

Reach for the Stars! Fun Topics in Astronomy and a Brief Exploration of Careers in All Things Astro: See Session A workshop description.

Hydroponic Gardening: See session A workshop description.

Session D (2:15-3:15 pm)

Cognitive Computing – See session C workshop description.

DNA and the Replication Process: See session C workshop description.

Foxhunting with Amateur Radio: See session A workshop description.

Hydroponic Gardening: See session A workshop description.

2022 UConn 4-H Adventures in STEM Junior Workshop Descriptions and Schedule

8:30-9:00 am – Registration, W. B. Young Building, Room 100

9:00 am – Announcements

9:30 am – 12:00 pm – Junior Workshop Activities *(Activities will be offered in round robin format. Each child will participate in each activity over the course of the event. Each activity will be a 30 minute session.)*

Case of the Library Bandit: You are a crime scene investigator on the hunt for the notorious library bandit. Conduct experiments to test the evidence and solve the case.

LEGO Marble Maze: Create your very own 3 dimensional maze using LEGO building blocks and a marble. Once you have mastered your creation, trade with others to test each other's designs.

Healthy Habits Jenga: Test your skills at this classic block stacking game but with a twist. Certain blocks contain color codes that will require you to complete additional challenges throughout the game.

Hack My Harvest: Become a farmer while you think like an engineer. Create your very own computer code to help the farmer reach the barn while collecting crops efficiently along the way. We will play individually and on our life size game board where you can become the farmer (and the crops).

Wind Racers: Design your very own wind powered vehicle. Once you have built it, you will have an opportunity to test your design and make modifications to improve as you test your skills against other builders.

12:00 pm - Dismissal

4-H Member/Volunteer Health Form

(Please Print)

Member/Volunteer Information (This form is used to ensure your safety and well being.)

Last Name	First	Middle Initial	<input type="checkbox"/> M <input type="checkbox"/> F Sex	/ / Date of Birth
Street Address	City	State	ZIP Code	() Home Phone No.

Notify in Case of Emergency (Emergency Contacts will be notified in order listed until one contact is reached)

Name	Relationship	Name	Relationship
Address		Address	
City Code	State	Zip	
() Home Telephone	() Work Telephone	() Cell Telephone	
City	State	Zip Code	
() Home Telephone	() Work Telephone	() Cell Telephone	

Allergies

Food (List Food)	Life Threatening?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Drug (List Drug)	Life Threatening?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Insect (List Insect)	Life Threatening?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other (List)	Life Threatening?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Personal Medical History

Previous Surgery/Hospitalization? Explain	Date
Physical Impairment? Explain	Date
Mental Health Issues Requiring Treatment? Explain	Date
Current Medications and conditions for which they are prescribed?	Date
Is there any other personal medical history you feel we should know?	Date

Parent/Guardian Authorizations:

I recognize that some activities have an inherent risk that could result in personal injury. The person herein described has permission to engage in all 4-H activities except as noted. Please list here:

During the program, I hereby give permission for the Program Staff to administer appropriate medical attention to my child/ward in the event of any accident, illness, or injury, including non-prescription medications or any medications my child brings in original containers with dosage instructions that is provided to program staff. In the event of an emergency, 911 will be called and I will be responsible for any and all costs of medical coverage and treatment provided not covered by my child's insurance.

Insurance Provider:	Insurance Policy Number:	
Signature of parent or guardian		Date
Printed Name		Date

Consent for Medication Administration

If your child or ward will be under the age of 18 while in attendance at 4-H, it is the University of Connecticut 4-H program policy to secure your consent for medication distribution and for the use of medical devices. The medication or medical device can be self-administered or be administered by the on-site professional staff.

All medications must be in a medicine bottle and labeled with the participant's name, doctor's name and phone number, medication name, and dosage.

It is the parent's responsibility to contact the 4-H volunteer or professional staff to make them aware of any medication that will need to be administered during the program. You must complete the form below.

_____ No medication will be brought to 4-H.

_____ I want the medication or medical devices self-administered (age 14 and above only).

_____ I want the medication or medical device administered by the on-site program provider. However, a limited amount of medication for life threatening conditions may be carried by my child or ward. (i.e. bee sting kits, inhalers)

Name of medication(s)	Prescribing Doctor	Doctor's phone number
Amount to be taken	How is it taken?	When to be administered?
Day(s) to be taken	Special Instructions	
Signature of Parent	Date:	



EMERGENCY CONTACT INFORMATION / PICK-UP AUTHORIZATION FORM

Program Name: _____ **Start Date(s):** _____ **End Date(s):** _____

This form must be completed in full, signed by a parent or guardian, and submitted PRIOR to pick-up on the first day of the program or activity.

I. CHILD'S INFORMATION

Child's Name: _____
First Last Phone Number (if applicable)

II. EMERGENCY CONTACT INFORMATION

1. Parent / Legal Guardian:		2. Parent / Legal Guardian (optional):	
_____	_____	_____	_____
First	Last	First	Last
_____	_____	_____	_____
Address	E-mail Address	Address	E-mail Address
_____	_____	_____	_____
Primary Phone	Secondary Phone	Primary Phone	Secondary Phone

III. PERSONS AUTHORIZED TO PICK-UP CHILD

In addition to the parent/guardian(s) listed above, please list the names of any possible persons authorized to pick up the above referenced child. Use the other side of this form to add additional names. Please Note: Photo ID's must be presented at the time of pick up.

_____	_____	_____	_____
First Name	Last Name	Relationship to Child	Phone Number
_____	_____	_____	_____
First Name	Last Name	Relationship to Child	Phone Number
_____	_____	_____	_____
First Name	Last Name	Relationship to Child	Phone Number

IV. AUTHORIZATION FOR SELF-CHECKOUT

Program participants will only be released at the scheduled program ending times, or times designated to the program by the parent/legal guardian. Please select from the check-out options listed below.

I do not grant my child permission to self-checkout from this program. Only the individuals listed above are authorized to pick-up and sign-out my child.

I will not be escorting my child to and/or from the program and grant my child permission to travel to and/or from the program and check-out independently at the conclusion of the program.

Signature of Parent or Guardian

Date



4-H Member Name _____
Name of Club _____
4-H Year _____

CONNECTICUT 4-H PROGRAM YOUTH MEMBER CODE OF CONDUCT AGREEMENT

As an enrolled 4-H member, I agree to the following Code of Conduct.

I will:

- ❖ Participate fully and cooperatively in the 4-H program.
- ❖ Abide by all rules and guidelines set by the 4-H program.
- ❖ Be responsible for my own behavior, and conduct myself in a manner that is appropriate and respectful to fellow 4-H program participants, staff, and the personal property of others at all times.
- ❖ Follow all program instructions and schedules.
- ❖ Display a positive attitude and good sportsmanship.
- ❖ Wear attire that is appropriate and suitable for 4-H activities.
- ❖ Not possess, offer, or use alcoholic beverages, illegal drugs, fireworks or tobacco while participating in any 4-H activity.
- ❖ Not carry or use any weapons while participating in any 4-H activity.
- ❖ Remain within the assigned program boundaries at all times, unless I have permission from the adult chaperone or leader.
- ❖ Understand that I will be released at the scheduled program ending time, unless I designate an alternate release time and my parent/guardian provides such authorization to the program coordinator in writing.
- ❖ Understand that 4-H project animals are shown at my risk.
- ❖ Promote a spirit of inclusion and welcome participation of individuals from all backgrounds, and refrain from behaviors that discriminate against other people.
- ❖ Access and operate machinery, vehicles, and other equipment in compliance with laws, rules of the 4-H program, and general safety practices.
- ❖ Not engage in behaviors which include and are not limited to true threat, actual physical assault, abuse or actions which cause physical or emotional harm. This harassing behavior may also include bullying which means repeated use of written, oral or electronic communication or physical acts or gestures directed at another individual.
- ❖ Understand that in the event of any declared state or local emergency, 4-H will follow UConn, State of Connecticut and/or municipal guidance as directed.

Youth Acknowledgement of Code of Conduct

I, _____ have read and understand the Code of Conduct and promise to follow and abide by the Code as stated above.

4-H Member's Signature _____ Date _____

Parent/Guardian Acknowledgement of Code of Conduct

I have read the above Code of Conduct and will encourage my child/ward to abide by them. I acknowledge that I am personally responsible for my child's behavior while at any sanctioned 4-H event or program. I expect that if my child/ward breaks the Code of Conduct or becomes disruptive and the adult leaders find it necessary to dismiss my child/ward from the program, that I am responsible for my child's transportation home. I also understand that any dismissal from the 4-H program for disciplinary reasons may not result in a refund. In the event my child/ward is detained by any legal authority, I expressly give my permission for a 4-H chaperone to remain with my child/ward until I can be present. I agree to use my best efforts to arrive as soon as possible upon being notified of such detainment.

I will complete and submit all requested 4-H program documents within the required timeline. I will also re-enroll my child/ward through the 4-H Online Enrollment System by December 1st to ensure they are an officially enrolled 4-H member, and I will provide 4-H with up-to-date emergency contact information.

I would like to receive notifications from UConn 4-H by text cell phone number _____

Cell phone provider (needed) _____

*Please continue onto page 2 for additional release, consent and waiver information and parent signature.

RELEASE, CONSENT AND WAIVER OF LIABILITY

In consideration for my child's participation in the Connecticut 4-H program at the University of Connecticut (the "Program"), I hereby RELEASE, WAIVE, DISCHARGE AND COVENANT NOT TO SUE the Program, the University of Connecticut, the University of Connecticut Board of Trustees, the State of Connecticut, the Connecticut Board of Governors, and their respective employees, agents, representatives and volunteers (hereinafter referred to as "RELEASEES") from any and all liability, claims, demands, actions and causes of action whatsoever arising out of or related to any loss, damage, or injury, including death, that may be sustained by my child (hereinafter "my child" or the "Participant"), or to any property belonging to me, WHETHER CAUSED BY THE NEGLIGENCE OF THE RELEASEES or otherwise, while participating in the Program, or while in, on or upon the premises where the Program is being conducted.

IDENTIFICATION AND ACKNOWLEDGMENT OF RISK

I understand that some activities and events may have inherent risks to my child by participating, and that 4-H project animals are shown at the risk of the 4-H member. I am fully aware of the risks and potential hazards connected with participating in the Program, including but not limited to, the risk of loss of personal property from theft, injuries associated with and other injuries that may not be foreseeable, and I hereby elect for my child to voluntarily participate in the Program and engage in such Program Activities knowing that they may be hazardous to my child and my property. All participants in this Program will be immersed into the University of Connecticut community on and off campus. I VOLUNTARILY ASSUME FULL RESPONSIBILITY FOR ANY RISKS OF LOSS, PROPERTY DAMAGE OR PERSONAL INJURY that may be sustained by my child, or any loss or damage to property owned by me, as a result of my child being engaged in such an activity, WHETHER CAUSED BY THE NEGLIGENCE OF RELEASEES or otherwise.

CONSENT TO RELEASE PARTICIPANT FROM PROGRAM

I understand that I am responsible for providing up-to-date emergency contact information and for escorting or making arrangements in writing for my child to be escorted to and from the Program. I understand that my child will not be permitted to leave the Program with an unauthorized person, unless I grant my child written permission to travel to and/or from the Program and check out independently at the conclusion of the Program. I further understand that the University is not responsible for participants who are authorized by their parent/guardian to leave the Program without adult supervision.

CONSENT TO PHOTOGRAPHY

I further hereby authorize the University of Connecticut 4-H Program to photograph and/or video record my child during the Program, and use or distribute any picture or video related to Program activities that my child is depicted in. I also authorize use of these materials for publication in brochures, on the websites, or other University of Connecticut 4-H promotional material. They may also be distributed to other Program participants, including but not limited to a Program group picture of all participants.

IN SIGNING THIS PARTICIPANT RELEASE, CONSENT AND WAIVER OF LIABILITY, I ACKNOWLEDGE AND REPRESENT THAT I have read the foregoing, understand it and sign it voluntarily as my own free act and deed; no oral representations, statements, or inducement, apart from the foregoing written agreement, have been made; I am at least eighteen (18) years of age and fully competent and I am the parent or guardian of the child participant, and I execute this Participant Release, Consent and Waiver of Liability for full, adequate and complete consideration, fully intending to be bound by same.

Printed Participant Name: _____

Printed Parent or Guardian Name: _____

Signature of Parent or Guardian: _____ Date: _____