



# Helicopter Program, 2011 (Students)

[www.ctspacegrant.org](http://www.ctspacegrant.org)

[www.cthelixp.com](http://www.cthelixp.com)

For All Details

Date: June 19-26, 2010

Location: Central Connecticut State University  
New Britain, CT

<http://www.facebook.com/pages/Space-Grant-Helicopter-Workshop>  
for pictures from 2010

**Sunday**

Flight Simulation, RC Helicopter Flight, RC Aircraft Flight (Indoors/Outdoors, students will fly RC aircraft)

**Monday**

Principles of Helicopter Flight, VTOL Aircraft Design Construction Techniques, Aerodynamics

(Student teams will be instructed on the design and build RC VTOL aircraft)

**Helicopter Flight over Connecticut**

**Tuesday**

Design of Experiments, Control Theory, VTOL Aircraft Building (Students will build a VTOL Remote Control Aircraft),

**KAMAN Aerospace tour**

**Wednesday**

Unmanned Aerial Vehicle Control and design methods Vertical Take Off and landing, RC VTOL design and construction

**Sikorsky Aircraft tour,** (Tour of Blackhawk Mfg)

**Thursday**

Static UAV Helicopter Testing

Wind tunnel testing

(Students will run wind tunnel test on a UAV designs for a new K-MAX Scale UAV) VTOL aircraft competition

**Friday**

Aerospace Careers (Students will receive an overview of NASA related careers)

Human Powered Helicopter Tests Fixture Experimentation (Students will run tests using rotor blade test fixtures to determine how to maximize the lift to drag ratio) One fixture is coaxial and the rotor blade diameters are 36 feet. Students will also run tests using a scaled Dual rotor blade test fixture see (2010 program).

**Saturday**

RC Aircraft Flight (Students will fly their VTOL aircraft)

Time to tour CT and New York

**Sunday**

Depart

**Applied Rotary Wing Engineering**

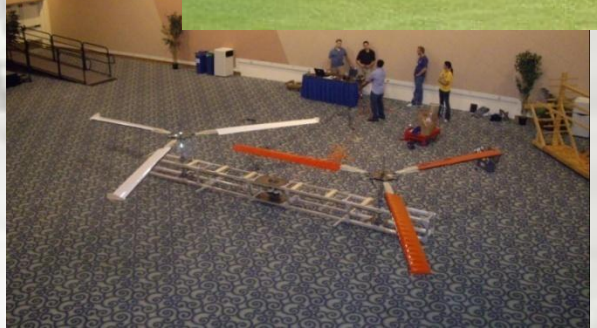
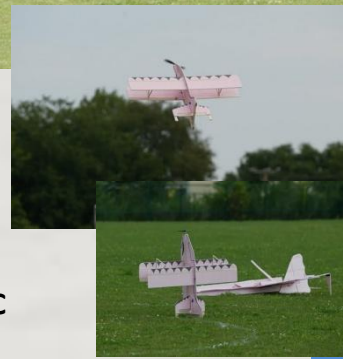
**Selected Students Will Receive**

- RC helicopter
- Helicopter experience T-Shirt
- Helicopter flight
- Tour of KAMAN Aerospace, Sikorsky Aircraft and New England Air Museum
- Practical Knowledge of fixed and rotary wing engineering and design
- Room board, transportation and tuition
- Class room instruction on aerodynamics, rotorcraft principles, wind tunnel testing, control theory, VTOL RC aircraft, etc

**Application Requirements**

- Must be a US Citizen
- Must be over 18
- Must have completed freshman year
- Must be interested in aerospace
- Fill out application at [www.ctspacegrant.org](http://www.ctspacegrant.org)

Also apply for a travel grant, in your state, to cover transportation and the \$500.00 registration fee. Travel grant application is at the above web site for colleges within Connecticut



t=0.167s

t=0.067s

t=0.000s

Space Grant Helicopter Workshop Plane built by Group 1 (Kerri, Tommy, Marius), flown by Luke.



CT Helicopter Training Workshop: Group1 - Flight [HD]