

AVIATION CONNECTION

Aviation Connection STEM Program AERO 2 – Engineering

The AERO 2 course covers the basic engineering processes applied by aerospace engineers.

A total of 45 hours delivered by Aviation Connection engineers and model airplane specialists with the participation of university students.

- ✓ Fall session : 13 x 1.5 hour sessions = 19.5 hours
- ✓ Fall session : 17 x 1.5 hour sessions = 25.5 hours
- ✓ 1 model cargo plane per team of 12 students

Students engage in a challenging project: Construction of a RC cargo aircraft and participate in an interschool competition at the end of the school year.



The winners receive the FORTIS prize accompanied by a grant.

Students work with the drawings of Aviation Connection aircraft model specially designed and tested to provide the best performance. From the drawings, students will build the best aircraft capable of carrying the heaviest load.

Program goals:

- ✓ Deepen the concepts learned in AERO1.
- ✓ Teach mathematical equations and their application in aircraft design project.
- ✓ Students discover the Microsoft True Notion "virtual toolbox" of induced drag and lift calculations for a 3-D wing.
- ✓ Estimation of stabilizer surfaces and tail length as a function of surface coefficients.
- ✓ Estimation of the size of the control surfaces and the forces needed to move them
- ✓ Preliminary estimate of the weight of the components
- ✓ Estimation of engine performance.