

The fluxcourse seeks to cross train attendees in measurement techniques and advanced modeling approaches for quantifying carbon and water fluxes between the atmosphere and the biosphere. The course will be offered to 24 graduate students, post-docs and early career scientists. The 6th annual flux course will take place the University of Colorado Mountain Research Station from the 15th through the 26th of July this summer.

THEORY

Formal lectures and tutorials
 Directed reading of literature
 Online videos for later use
 Discussion with leading scientists

PRACTICE

Hands on measurements
 Build an eddy covariance system
 Computer tutorials
 Class exercises

INTEGRATE

Group project synthesis
 Perspective discussions
 Tour of Niwot Ameriflux Site
 Tour of NEON headquarters



MEASUREMENTS

Leaf Level Gas Exchange Measurements
 Leaf Level Biochemistry (Farquhar Model)
 From Leaf to Canopy (Penman-Monteith)
 Theory and Measurement of Canopy Fluxes
 Eddy Flux Measurement, Sonics and Sensors
 Applications of Flux Tower Networks
 Using Eddy Covariance Instrumentation
 Use of Stable Isotope to Infer Fluxes
 Ecosystem Energy and Mass Fluxes

MODELING

The Challenge of Data and Models
 Principles of Modeling Ecosystem Fluxes
 Satellite Observations and Surface Fluxes
 Theory and Practice of Data Assimilation
 Extracting Information from Data
 Combining Multiple Data Streams
 Regional and Global Model Flux Estimates
 Informing Land Surface Models with Data
 The Global Carbon Cycle



All lessons are available to course attendees online. Check out last year's course video via the link opposite:



For more information about the course and application instructions, follow the link to the website www.fluxcourse.org



Instructors 2013: Dennis Baldocchi (University of California), Carl Bernacchi (University of Illinois), Mike Dietze (University of Illinois), Deborah Huntzinger (Northern Arizona University), Larry Jacobsen (Campbell Scientific, Inc.), Ray Leuning (CSIRO, Australia), Andrew Fox & Hank Loescher (NEON, Inc.), Pat Morgan and George Burba (LI-COR Biosciences), Marcy Litvak (Univ New Mexico), Russell Monson, David Moore and Shirley Papuga (University of Arizona), Tristan Quaife (Reading University), Dave Schimel (NASA JPL), Paul Stoy (Montana State), Ed Swiatek (Campbell Scientific, Inc.), Diane Pataki (UC Irvine), John Zobitz (Augsburg College).