

*The University of British Columbia*  
*SOIL 524: Instrumentation for Biometeorology*

*Meeting time: to be arranged Room 135, MCML Building*

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The theory, design and evaluation of instrumentation for biometeorological research.

The course provides an opportunity for a student to focus on a particular biometeorological sensor and learn about its principles of operation, how it's calibrated, its rate of sampling to correctly track a changing meteorological variable, and how data are transmitted to and recorded on various data loggers. There is normally a project that requires a report involving data analysis, sensor/instrument design, calibration and construction. Biometeorological variables of interest are solar (shortwave), photosynthetically active and longwave radiation, wind speed and direction, turbulence, air and soil temperature, humidity, soil moisture and potential, plant water potential, barometric pressure and fluxes of greenhouse gases (using eddy covariance and chamber methods).