Course Description: This course focuses on agricultural equipment that is commonly used in conjunction with GPS technology. Planters, combines, fertilizer application equipment and sprayer application equipment are commonly equipped with GPS equipment to control and record operational parameters. These parameters focus around the equipment's geographic location and can be recorded simultaneously with the volume of product applied and weather information (wind, temperature, humidity, etc.). GPS guidance is one of the main technologies to be studied throughout the course. The management of this equipment and the GPS technologies used to control and record this information is the focus of the course.

Online Portion of the Course
Offered from January 21 through March 13, 2014

Two Full Days of Hands-On Lab Session to be offered at Columbia, Missouri
Outline of Course by Session
(The online portion of the course will formally run for 8 weeks covering the following 14 sessions.)

1. Introduction to Precision Agriculture
2. GPS Systems
3. Overview of Machinery Management Concepts
4. An Introduction to Mapping (GIS) Technologies
5. Precision Ag Data Management – Field Identification – A Key Component
6. The Nuts and Bolts GPS Guidance – Aided (Lightbars), Assisted Steering, and Automatic Guidance
7. Tractor Issues – The main items of discussion will be GPS Guidance/Auto Steer, utilizing control systems - factory installed or aftermarket, data collection issues during the growing season – agronomic and machine data.
8. Overview of Variable-Rate Technologies
9. Sensor Technologies for Variable-Rate Application
10. Planters
11. Fertilizer Application Equipment
12. Sprayers
13. Combines – Harvesting Equipment
14. Why Adopt GPS / Precision Ag Technologies?

Development of a plan to incorporate precision agriculture technology into an existing equipment line will be a central theme through the course.

Sessions 15, 16, 17 and 18 will be Hands-On Labs

There will be two full days of 2 hands-on lab sessions each day. Day one will include a lab on GPS equipment; setup and diagnostics and a lab on RTK GPS setup and operation. Day two will include a 1 lab on GPS guidance/auto steer setup and operation and a lab on maximizing the use of precision ag technologies from yield monitoring—combine applications to variable rate applications. Each day’s lab session will run from 9:00 a.m. till 3:00 p.m. and be offered in two locations. Lab sessions will be held on February 14 and February 28 at the Boone County University of Missouri Extension Center at Columbia, MO.

Registration Form

Name ___________________________________________

Address _________________________________________

City ______________________ State ______ Zip ________

Day Time Telephone _______________________________

E-mail ___________________________________________

Participation in the Course and Associated Fees

(Check Option)

☐ Online Portion Only................................. $180
☐ Hands-On Lab Portion Only.........................$120
☐ Full Course (Both Online and Hands-On Portions).................................$300

Make checks payable to: University of Missouri Extension

And mail to: Kent Shannon
University of Missouri Extension
Boone County
1012 N. Highway UU
Columbia, MO 65203

Registration Deadline: Tuesday, January 14, 2014

Cost of the course includes access to online and hand-out materials; participation of hands-on lab will include lunch for the 2 days

For More Information Contact:
Kent Shannon, Natural Resource Engineer, University of Missouri Extension-Boone County, shannond@missouri.edu, 573-445-9792

For a complete program go online at:
http://extension.missouri.edu/boone/precisionag.aspx