

Fundamentals in Applied Agronomy

October-December, 2009

Certified Crop Adviser Preparatory Short Course offered by the American Society of Agronomy

Instructor

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Class Schedule/Time

Orientation Thursday October 1, then Tuesdays from October 6 to December 22

7:00 to 9:15 p.m. Eastern/ 6:00 to 8:15 p.m. Central/5:00 to 7:15 Mountain/4:00 to 6:15 p.m. Pacific

To maximize their learning, students will be expected to spend time reading and studying outside of class in addition to the scheduled class periods. You may contact the instructor at any time via telephone or email with your questions or comments.

Communication Requirements

High-speed internet access
Email address
Microphone to connect with computer

Textbooks Required (must be purchased by student)

Preparing for the International CCA Exam (International Plant Nutrition Institute)

<http://ppi-store.stores.yahoo.net/ccamanual.html>

(The 2010 version is now available to order online.)

Soil Fertility Manual (International Plant Nutrition Institute)

<http://ppi-store.stores.yahoo.net/soilferman.html>

Field Crop Scouting Manual (University of Illinois)

<https://pubsplus.uiuc.edu/CDR880d.html>

Please note: Much of the required reading for this course will be available from Extension and other publications available free on the Internet.

Exams/Grading There will be a short quiz at the end of each class period that covers the materials from the previous weeks. There will not be a final exam for this course, and grades will not be assigned. However, you will be notified of your performance on weekly quizzes to give you an indication of your mastery of various topics. No make-up quizzes will be offered.

There will be a class web site where lectures will be archived and quizzes will be posted along with any other materials and instructions from the instructor.

Syllabus (subject to change)

Date	Subject	Topics	Reading Assignment Prior to Class
Oct 1	Orientation	Using the Online Classroom, Instructor Introduction, Review Learning Objectives	Becoming Certified: https://www.certifiedcropadviser.org/become-certified/
Oct 6	Soil and Water Management	Soil Chemical, Physical and Biological Characteristics	Preparing for the 2009 International CCA Exam, pages 51-82 (The 2010 version is now available to order online.) Management of Wisconsin Soils Chapters 1 and 2: http://learningstore.uwex.edu/Management-of-Wisconsin-Soils-P786C43.aspx Using a Soil Survey Web Soil Survey (WSS) (Explore) http://websoilsurvey.nrcs.usda.gov/app/
Oct 13		Site Characterization, Tillage and Residue Management	Management of Wisconsin Soils Chapter 5 Managing Crop Residue with Farm Machinery http://www.agry.purdue.edu/ext/pubs/AY-280-W.pdf Public Land Survey System http://dnr.wi.gov/forestry/private/PLSSTut/plsstut1.htm
Oct 20		Water and Solute Movement, Soil/Plant Water Relations, Irrigation and Drainage	Management of Wisconsin Soils Chapter 3

Oct 27	Nutrient Management	Basic Concepts of Plant Nutrition and Soil Fertility, Soil pH and Liming	Preparing for the 2009 International CCA Exam, pages 1-39 Soil Fertility Manual Chapters 1 & 2
Nov 3		Fertilizers and Other Nutrient Sources	Soil Fertility Manual Chapters 3, 4, 5, 6, and 7
Nov 10		Soil and Tissue Analysis and Interpretation, Nutrient Management Planning	Soil Fertility Manual Chapters 8, 9, 10, and 11
Nov 17	Crop Management	Cropping Systems, Hybrid and Variety Selection	Preparing for the 2009 International CCA Exam, pages 145-167
Nov 24		Crop Growth, Development, and Diagnostics	How a Corn Plant Develops http://www.extension.iastate.edu/hancock/info/corn.htm Cotton Growth and Development http://pubs.caes.uga.edu/caespubs/pubcd/B1252.htm#Introduction How an Alfalfa Plant Develops http://www.ag.ndsu.edu/pubs/plantsci/hay/r648w.htm
Dec 1		Harvest and Storage, Managing Production Risk, Precision Farming	
Dec 8	Pest Management	Principles of Integrated Pest Management, Pest/Ecosystem Interactions	Preparing for the 2009 International CCA Exam, pages 91-135 Field Crop Scouting Manual, Chapter 1
Dec 15		Pest Identification, Sampling and Monitoring, Decision-Making Guidelines	Field Crop Scouting Manual, Chapter 2 and Weed Keys 2009 Weed Control Guide for Ohio and Indiana http://www.btny.purdue.edu/pubs/WS/WS-16/
Dec 22		Pest Management Strategies—Insects,	Field Crop Scouting Manual, Chapters 3, 4, and 5 Various Extension guides (to be announced)

Course Description Fundamentals in Applied Agronomy is an introductory crops and soils course designed for the practitioner hoping to build their knowledge and skills in the topics that are most needed for a Certified Crop Adviser. Upon completion the learner should have a fundamental knowledge of soil and water, nutrient management, pest management, and crop management. Topics include basic soil physical and biological characteristics, resource conservation, irrigation, drainage, water quality, soil and tissue analysis and interpretation, fertilizers and other nutrient sources, soil pH and liming, pest identification, sampling, and control, cropping systems, planting practices, crop growth and development, harvest, storage, and managing production risk, among many others.

The course is taught using distance education technology, but a variety of practical examples and case situations will be woven into content delivery to maximize understanding and its application in the field. Whether you are personally involved in production agriculture, advising farmers as an agricultural retailer or consultant, a representative for an agricultural business or government agency, or just looking to build your expertise, this course will cover topics that should be of direct interest to you. While this course is not designed to teach a student how to take the Certified Crop Adviser exams or to cover all the topics included in local or International performance objectives, it will complement an individual's preparation in becoming a Certified Crop Adviser or Certified Professional Agronomist.

Course Instructor Bruce Erickson is a Certified Professional Agronomist that uses his expertise and experience in education and agribusiness to provide solutions for crop producers, their advisers, and the industries that depend on them. Erickson's areas of expertise include corn and soybean production, remote sensing and its application in precision agricultural practices, instructional design, and competency-based education and assessment. For the last several years Erickson has worked in a consulting role to agribusinesses and government agencies in the U.S. and Canada. He has experience in building technical, product-related, sales and marketing programs to fulfill individual proficiency needs and to meet business goals, and then delivering through classroom, field, teleconference, CD and web-based platforms. Erickson is the Director of Cropping Systems Management in the Department of Agricultural Economics at Purdue University, where he conducts research related to farm technology and farm management economics, leads the team that plans and implements the Top Farmer Crop Workshop, and also works extensively with the Site-Specific Management Center and Field Crops Extension programming.

Erickson grew up on an Iowa farm, completed his undergraduate work at Iowa State University in Agronomy, and then began his professional career as an agronomist with Pioneer Hi-Bred. After completing his Master's at Iowa State in Crop Production and Physiology and his PhD in Agronomy at Purdue, Erickson was on the staff of the Purdue Department of Agronomy where he taught the introductory agronomy course and played a leading role in developing and maintaining the performance objective documents and the minimum proficiency exams for the International Certified Crop Adviser Program (CCA). More recently, Bruce served as Senior Technical Designer at Agri Business Group in Indianapolis, an agricultural consulting company.

For more information, see: <http://www.agecon.purdue.edu/directory/details.asp?username=berickso>