

# AGRONOMY ESSENTIALS ONLINE COURSE

**2018 Session Starting Dates for this 12-Week Course: January 10, June 13 and September 19**

## AGRONOMY EDUCATION OFFERED IN A CONVENIENT FORMAT

The business of growing crops has become increasingly complicated in recent years. Agriculture has been challenged with growing demands to increase production while minimizing the environmental impact. New technologies and a knowledge-based future will require a more thorough understanding of the whole production system.

In 2015, Agronomy Essentials earned Purdue's highest award for professional online courses. This 26 module course will help people who need a broad-ranged understanding of soils, crop nutrients, cropping systems, pest management, crop growth and development, diagnostics, and a host of other topics. Our world-class subject matter experts have long provided their expertise. Now this is available through distance education. No matter what your role in agriculture or agri-business, you will gain a base of agronomic understanding from this course that was specifically designed to meet the needs of off-campus learners.

Course content is provided in a convenient online learning management system where participants can access the recorded video segments, reading materials, graphics, glossary and assessments at their convenience. Courses will be offered in specific time periods, but students will have the flexibility to work on their own time and wherever they have access to the internet.

**Successful Completion Earns Certificate of Completion and 25 Certified Crop Adviser CEUs**

*Employees will gain a basic knowledge of agronomy and will grow in understanding of management challenges of crop production. The course will equip them to more effectively communicate, helping build customer confidence and trust.*

*A certificate and 25 Certified Crop Adviser continuing education units (CEUs) will be awarded for successful course completion.*



### Contact Us

For more information about this or other online agronomy courses designed for the needs of sales staff, farmers and other agricultural professionals.

Email: [ellearn@purdue.edu](mailto:ellearn@purdue.edu)

Webpage: <http://tinyurl.com/purdueagry> OR

<http://ag.purdue.edu/agry/ADE/pages/default.aspx>

# AGRONOMY ESSENTIALS

## ONLINE COURSE

### Designer & Instructor

**Bruce Erickson, PhD, CPAg**



Bruce Erickson, PhD, is Purdue University's Agronomy Education Distance & Outreach Director. In this course, Dr. Erickson shares from his wealth of experience in agronomy and dis-

tance education.

Dr. Erickson completed his undergraduate degree at Iowa State University in agronomy, then began his professional career as an agronomist with DuPont Pioneer. After completing his Master's Degree at Iowa State University in crop production & physiology and his Doctoral Degree in agronomy at Purdue, Dr. Erickson joined the staff of the Purdue Department of Agronomy.

Dr. Erickson previously served as Senior Technical Designer at Agri-Business Group in Indianapolis. He was Director of Cropping Systems Management and Associate Director of the Center for Commercial Agriculture, where he worked extensively with precision farming and crop production economics research.

Most recently, he was the Agronomic Education Manager for the American Society of Agronomy, where he was responsible for the International CCA performance objectives and development of the International CCA Exam, the India CCA Exam, and the Mexico CCA Exam.

### Course Syllabus

#### UNDERSTANDING THE LAND/ FIELD PREPARATION

- Soil Texture & Structure, Biological & Chemical Properties
- Water & Solute Movement in Soils, Irrigation, Drainage Methods
- Site Characterization, Legal Land Descriptions, Understanding Soil & Field Maps
- Tillage & Residue Management, Soil Restrictive Layers
- Soil Conservation, Water and Air Quality

#### PLANT NUTRITION/ SOIL FERTILITY

- Essential Elements, Plant Functions & The Nitrogen Cycle
- Soil & Plant Nutrient Assessment
- Fertilizers & Manures
- Fertilizer Application, Placement and Timing
- Fertilizer Additives & Soil Amendments

#### CROP AND VARIETY SELECTION/ PLANTING

- Crop Types & Cropping Systems, Crop Improvement
- Seed Selection & Characteristics of Corn, Soybeans & Wheat  
Crop Testing
- Planter & Drill Operation
- Corn, Soybean, Wheat & Forage Management Practices
- Precision Farming

#### CROP GROWTH/ DEVELOPMENT/ DIAGNOSTICS

- Corn Growth & Development
- Soybean Growth & Development
- Small Grains & Forages Growth & Development
- Photosynthesis & Plant Growth, Cell & Leaf Anatomy
- Crop Diagnostics & Troubleshooting

#### CROP PROTECTION/ PEST MANAGEMENT

- Weed Identification & Management Principles
- Insect Identification & Management Principles
- Disease Identification & Management Principles
- Pesticide Application & Stewardship

#### HARVESTING AND MARKETING THE CROP

- Crop Harvest, Storage & Quality
- Marketing & Basic Economics