Agronomy Essentials Online
January 14 – April 8, 2015

1. Class Orientation, Objectives, Expectations, and Overview of Agronomy and Crops

UNDERSTANDING THE LAND/ FIELD PREPARATION

2. Soil Texture and Structure, Biological and Chemical Properties
3. Water & Solute Movement in Soils, Irrigation and Drainage Methods
4. Site characterization, Legal Land Descriptions, Understanding Soil and Field Maps
5. Tillage and Residue Management, Soil Restrictive Layers
6. Soil Conservation, Water and Air Quality

PLANT NUTRITION/ SOIL FERTILITY

7. Essential Elements and Plant Functions, The Nitrogen Cycle
8. Soil and Plant Nutrient Assessment
9. Fertilizers and Manures
10. Fertilizer Application, Placement and Timing
11. Fertilizer Additives and Soil Amendments

CROP AND VARIETY SELECTION/ PLANTING

12. Crop Types and Cropping Systems, Crop Improvement
13. Seed Selection Characteristics of Corn, Soybean and Wheat, Crop Testing
14. Planter and Drill Operation
15. Corn, Soybean, Wheat and Forage Management Practices
16. Precision Farming

CROP GROWTH/ DEVELOPMENT/ DIAGNOSTICS

17. Corn Growth and Development
18. Soybean Growth and Development
19. Small Grains and Forages Growth and Development
20. Photosynthesis and Plant Growth, Cell and Leaf Anatomy
21. Crop Diagnostics & Troubleshooting

CROP PROTECTION/ PEST MANAGEMENT

22. Weed Identification and Management Principles
23. Insect Identification and Management Principles
24. Disease Identification and Management Principles
25. Pesticide Application and Stewardship

HARVESTING AND MARKETING THE CROP

26. Crop Harvest, Storage and Quality
27. Marketing and Basic Economics