6/29/2023 DATE
☑ REQUIRED COURSE
☑ ELECTIVE COURSE

Agriculture DIVISION
☐ NEW COURSE
☐ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:	AGR-151	**TITLE:** *(30 Characters Max)*	GPS/Applications in Ag								
SEM CR HRS:	3.6	**Lecture:**	2	**Lab:**	2					**ECH:**	6
Course Level:	☐ Gen Ed / IAI ☐ Career/Technical ☑ Baccalaureate /Non-IAI ☐ Dev Ed/ Not in Degree Audit			**Clinical Practicum:**	2	**Work-based Learning**	0	**WBL ECH:**	0		
COURSE PCS #	12 - 01.0304	**IAI Code**						**Contact Hours (Minutes Per Week)**			
Repeatable (Y/N):	N	**Pass/Fail (Y/N):**	N	**Variable Credit (Y/N):**	N	**Min:**		**Max:**		**16 Wks**	300	**8 Wks**	600
Prerequisites:											
Catalog Description: (40 Word Limit)	This class is designed to provide students the opportunity to become familiar with global positioning systems as they relate to agriculture and develop a working knowledge of variable rate systems.										

	List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
1	Positioning Systems	4	6		
2	Yield Monitoring and Mapping	7	8		
3	Remote Sensing	6	7		
4	GPS Soil Sampling	6	4		
5	Variable Rate Technologies	4	4		
6	Management Strategies	3	1		
	TOTAL	30	30	0	0

EVALUATION							
QUIZZES	☑	**EXAMS**	☑	**ORAL PRES**	☐	**PAPERS**	☑
LAB WORK	☑	**PROJECTS**	☐	**COMP FINAL**	☑	**OTHER**	☐

COURSE MATERIALS		
TITLE:	The Precision-Farming Guide for Agriculturalists	
AUTHOR:	Dr. Mark Morgan and Dr. Dan Ess	
PUBLISHER:	John Deere Services Publications	
VOLUME/EDITION/URL:		
COPYRIGHT DATE:	1997	

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		The student will be able to:
Positioning Systems	10	Compare different systems utilized and how they work.
Yield Monitoring and Mapping	15	Explain the role yield monitor plays in precision farming and how to interpret the maps that are generated.
Remote Sensing	13	Explain remote sensing, how it works, and how it is utilized in crop scouting and other areas of agriculture.
GPS and Soil Sampling	10	Discuss the importance of GPS and soil sampling, sampling intensity and methods for collecting soil samples.
Variable Rate Technologies	8	Name components of variable rate applicators, issues to consider with variable rate technologies and future applications of variable rate technologies.
Management Strategies	4	Describe how to develop management plans for cropping rotations, fertilizer application and chemical application using variable rate technology.

Insert New Line Above this Line		
	60	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
• Discuss the different positioning systems used.	
• Explain the role yield monitors play in precision farming and how to interpret generated maps.	
• Discuss the importance of soil testing utilizing GPS.	
• Name the components of variable rate applicators, current issues with variable rate technologies, and future applications of VRT.	

** Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.*