

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGIES & SKILLED TRADES DIVISION
JOHN DEERE TECH
COURSE SYLLABUS
September 10, 2025

I. CATALOG DESCRIPTION

Course Number: JDAT1901
Course Title: John Deere COOP
Prerequisite(s): JDAT1130, JDAT1220

Catalog Description: On-the-job experience in a John Deere agricultural dealership. Application of skills and concepts learned in previous semesters. Supervised by Southeast Community College-Milford Campus John Deere Tech Instructors.

Credit Hours: 5
Classroom Hours: 0
Lab Hours: 300
Total Contact Hours: 300

II. COURSE OBJECTIVES: *Course will:*

- A. Cover how to complete a work order.
- B. Cover the pre-delivery of a new tractor or combine.
- C. Cover how to adjust wheel tread and ballast a tractor.
- D. Cover how to service John Deere equipment.
- E. Cover removing and replacing bearings, races & seals on a tractor front axle or equivalent.
- F. Cover servicing, testing and charging a battery.
- G. Cover checking, testing and repairing cranking circuit.
- H. Cover diagnosing and repairing electrical system component failure.
- I. Cover how to complete a cylinder balance test, compression test, and leakage test.
- J. Check the cooling system.
- K. Disassemble, recondition, and reassemble a complete engine and components.
- L. Cover how to operate a dynamometer to check horsepower, repair horsepower complaint, plot a torque curve, and break-in an engine.
- M. Cover how to remove, inspect, and adjust pump and nozzles.
- N. Cover how to check and adjust hydraulic system components.
- O. Cover set up/repair of tillage, seeding, and harvest equipment to factory spec and performance.
- P. Cover how to complete SDS worksheets.
- Q. Cover interviewing TM, TCSM, Parts Manager, and Sales Manager.
- R. Cover complete 2 Show-N-Tell reports with pictures.
- S. Teach how to manage job times, document in a work order, and complete work records.
- T. Teach how to lookup service pricing guides.
- U. Teach how to access Dealer Path/What's New.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES

- A. STUDENT LEARNING OUTCOMES:** *Student will be able to:*
- 1. Student will be able to gain real world work experience.

2. Student will be able to complete weekly work records.
3. Student will be able to know how to fill out a work order.
4. Student will be able to learn how to manage time.
5. Student will be able to learn to use service pricing guides.
6. Student will be able to know how to access Dealer Path.
7. Student will be able to know how to access Service Advisor.
8. Student will be able to understand the importance of What's New.
9. Student will complete 2 Show-N-Tell presentations with pictures.
10. Student will be able to meet the TM.
11. Student will be able to meet the TCSM.
12. Student will be able to learn expectations of Parts Manager.
13. Student will be able to learn expectations of Service Manager.
14. Student will be able to know how to obtain SDS information.
15. Student will be able to pre-delivery a new tractor.
16. Student will be able to pre-delivery a new combine.
17. Student will be able to adjust wheel tread on a tractor.
18. Student will be able to ballast a tractor.
19. Student will be able to safely use shop tools.
20. Student will be able to safely use cutting torch.
21. Student will be able to safely use a welder.
22. Student will be able to service a battery.
23. Student will be able to test a battery.
24. Student will be able to charge a battery.
25. Student will be able to check cranking circuit.
26. Student will be able to repair cranking circuit.
27. Student will be able to check charging system.
28. Student will be able to repair charging system.
29. Student will be able to diagnosis and repair electrical system components failures.
30. Student will be able to complete a cylinder balance test.
31. Student will be able to do a compression test.
32. Student will be able to do a leakage test.
33. Student will be able to check cooling system.
34. Student will be able to disassemble engine and components.
35. Student will be able to recondition engine and components.
36. Student will be able to reassemble engine and components.
37. Student will be able to operate a dynamometer to check horsepower and plot a torque curve.
38. Student will be able to operate a dynamometer to break-in an engine.
39. Student will be able to operate a dynamometer to repair a horsepower complaint.
40. Student will be able to remove, inspect, and replace an injection pump.
41. Student will be able to remove, inspect, and replace injection nozzles.
42. Student will be able to check and adjust hydraulic system components.
43. Student will be able to set up/repair tillage equipment to factory specs and performance.
44. Student will be able to set up/repair seeding equipment to factory specs and performance.
45. Student will be able to set up/repair harvesting equipment to factory specs and performance.

B. GENERAL EDUCATION LEARNING OUTCOME:

GELO #3: Critical Thinking & Problem Solving

1. Synthesize information to arrive at reasoned solutions to problems.
2. Acquire and integrate knowledge and construct relationships across disciplines.

IV. CONTENT/TOPICAL OUTLINE

- A. Successfully complete coop to dealership and John Deere Ag Tech expectations.
- B. Complete SDS assignment.
- C. Complete Show-N-Tell assignment.
- D. Complete What's New and SPG assignments.
- E. Complete weekly work records.

V. INSTRUCTIONAL MATERIALS

Required text(s): John Deere Technical Manuals – as supplied by Service Advisor.

Other material(s): Required tool set
Safety glasses (regulation Z87)
Leather boots
John Deere uniform
Colored pencils
Notebook
Writing instruments
RACF identification and password

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Small and large group discussion
3. Video presentations
4. Demonstrations
5. Project boards
6. Flip charts
7. Handouts
8. Observations
9. Assigned lab projects
10. Field trips

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of the following:

1. Weekly work records
2. Assignments turned in.
3. Evaluation of visits with dealership service manager.
4. Attendance/Behavior
5. Presentations

Grading will follow the SCC Standard Grade Scale Policy. See **Course Information Document** for specific details on how the course grades are calculated.

VIII. SPECIFIC COURSE REQUIREMENTS:

- A.** Students must complete all tests, projects, assignments, and notebook (if required).
- B.** Students must earn a final grade of 70% (2.0) or higher.
- C.** Program safety rules will be followed. See the **Course Information Document** for any additional safety rules established by the instructor.
- D.** Safety belts will be worn at all times, on or in any motorized vehicle, if equipped.
- E.** Attendance and participation. See **Course Information Document** for attendance and participation policy.