

# CATERPILLAR® DEALER SERVICE TECHNICIAN PROGRAM



**San Joaquin Delta College**  
**Stockton, California**





# THE PROGRAM

The Caterpillar® Dealer Service Technician program helps you develop the skills you’ll need to diagnose and repair tractors, trucks, graders, excavators and the rest of the Cat equipment line. You’ll work with the latest diagnostic tools, current machines and components as you complete your lab assignments. As a bonus, you’ll earn an Associate of Science Degree from San Joaquin Delta College when you finish. Earn while you learn by serving four paid internships at your sponsoring Cat dealership.

Heavy equipment technicians are in high demand and earn excellent pay and benefits.

**Think BIG about your future.**



# COLLEGE COURSEWORK

## Freshman Year (Fall)

### Caterpillar Service Industry (CAT 80) — 3 units

This course is an overview of the Caterpillar organization, basic shop safety, dealer shop structure and equipment. You’ll learn the Service Information System (SIS), a computer-based source for parts, repair and maintenance information.

### Caterpillar Engine Fundamentals (CAT 81) — 4 units

Begin by starting your high-horsepower CAT 3406 engine. During the next 9 weeks, you’ll disassemble, inspect, measure, reassemble and make adjustments to your engine. Along the way, you’ll learn diesel engine systems and proper service procedures.

### Agricultural Welding (AGEGR 21) — 2 units

Learn the welding processes used in the equipment industry. You’ll experience arc and acetylene welding and study hard facing, brazing, flame cutting, electrode selection and metal identification.

### Ag/Natural Resources Mathematics (AGBUS 013) — 3 units

An introduction to arithmetic and algebraic functions used in plant production, farm machine outputs, construction costs, feed ingredients and farm finance. You’ll use fractions, decimals, equations, percentages, ratios, area and volume measurements and more. AGBUS 013 fulfills the Learning Skills (B) requirement for the AS degree.

### Introduction to College and Educational Planning

#### (GUID 019) — 1 unit

An overview of the college experience and the educational planning process through counseling and advising, the course assists students in making academic decisions and establishing career goals.

### OJT (On-the-Job Training) - I (CAT 69V) — 4 units

Earn as you learn under the supervision of trained technicians at one of the sponsoring Caterpillar dealerships. You’ll rotate between training at SJDC and practicing at the dealer work site in real-world applications. 40 hours/week.



## Freshman Year (Spring)

### Fundamentals of Hydraulics (CAT 82) — 3 units

This course is a practical study of hydraulic systems, principles and components – the heart of most current Cat machines. You’ll learn to service and maintain modern systems and lay the foundation for more advanced courses.

### Caterpillar Engine Fuel Systems (CAT 83) — 3 units

Building on the engine fundamentals class, you’ll learn how modern Cat fuel systems operate, how they generate 25-30,000 psi, and the service procedures needed to test and adjust them.

### Fundamentals of Electrical Systems (CAT 84) — 3 units

You’ll learn the electrical fundamentals that lay the foundation for diagnostic skills taught in later classes. The use of the Digital Volt-Ohm Meter is emphasized as you learn to test electrical circuits, components and starting / charging systems.

### Conservation of Natural Resources (N R 002) — 3 units

You’ll examine the need, importance, and philosophy of conservation of natural resources in our contemporary world. Current environmental issues are discussed from local, national and global perspectives. N R 002 fulfills the Natural Science requirement for the AS degree.

### Introduction to Business (BUS 020) — 3 units

This course builds an understanding of the market economy, the business environment, economic systems, management, organization and operation of businesses from a unique Caterpillar perspective. BUS 020 fulfills the Contemporary Perspectives requirements for the AS degree.

### OJT - II (CAT 69V) — 4 units

Paid internship at your sponsoring Caterpillar dealer. 40 hours/week.

## Freshman Year (Summer)

### Caterpillar Air Conditioning (CAT 85) — 2 units

Learn the theory and uses of air conditioning in agricultural, construction and heavy truck applications. You’ll recover, recycle and recharge refrigerant as you learn to use the service equipment of the industry – refrigerant identifiers, leak detectors, and gauge manifolds. You’ll become proficient at interpreting system pressures, electronic controls, sensors and control logic.

### Fundamentals of Caterpillar Power Trains

#### (CAT 86) — 3 units

In this course, you’ll disassemble, examine and reassemble a broad range of Cat transmissions, torque converters and flywheel clutches. From manual to automatic, power shift to hydrostat, you’ll learn about power flow, transmission controls, system operation and adjustments.

### Caterpillar Machine Hydraulic Systems

#### (CAT 87) — 3 units

This advanced hydraulic systems class develops your skills in reading and interpreting schematics. You’ll learn the proper procedures and tooling required to diagnose and repair hydraulic problems in Cat machines and components.

### OJT - III (CAT 69V) — 4 units

Paid internship at your sponsoring Caterpillar dealer. 40 hours/week

## Sophomore Year (Fall)

### Caterpillar Undercarriage and Final Drives (CAT 90) — 3 units

In this course, the parts that move Cat machines are investigated - tracks and associated elements, drivelines, differentials, axles, final drives and brakes. You’ll learn procedures to disassemble, assemble and maintain these components to maximize machine up-time.

### Caterpillar Machine Electronics (CAT 91) — 3 units

Caterpillar electronically-controlled fuel systems make up the bulk of the work in this class. You’ll discover how an Electronic Control Module (ECM) looks at sensor inputs and determines proper fuel metering and injection cycles. You’ll examine system performance, interpret diagnostic codes and follow prescribed troubleshooting procedures using the laptop computer and Electronic Technician (ET).

### Preparatory English (ENG 079) — 5 units

Designed to develop the skills necessary for college level English composition, this course concentrates on writing well-organized paragraphs and essays, improving reading comprehension and reviewing grammar and usage. ENG 079 fulfills the Learning Skills (A) requirements for the AS degree.

### Small Group Communication (COM ST 008) — 3 units

You’ll be part of a team at the dealership. This course develops your abilities to communicate effectively, plan meetings, make group decisions, understand modes of communication, manage conflict, and enhance listening skills. COM ST 008 fulfills the Learning Skills (C) requirements for the AS degree.

### Child, Family, and Community (CDEV 026) — 3 units

In this course you’ll study the interactive nature of child, family and community influences on development. Community resources and advocacy are also explored. CDEV 026 fulfills the Social Science (B) requirements for the AS degree.

### OJT – IV (CAT 69V — 4 units

Paid internship at your sponsoring Caterpillar dealer. 40 hours/week.

## Sophomore Year (Spring)

### Caterpillar Engine Performance (CAT 92) — 2 units

Engine performance and reliability are the focus of this class. While you learn to monitor parameters like fuel consumption, manifold pressure, intake air temperature and others, you’ll develop the knowledge and diagnostic skills needed to troubleshoot Cat diesel engines.

### Caterpillar Diagnostic Testing (CAT 93) — 2 units

An in-depth study of machine diagnostics and repair techniques, you’ll learn proper selection and use of Caterpillar diagnostic tools. The majority of your time will be spent on the iron diagnosing and correcting machine problems.

### Caterpillar Machine Specific Systems (CAT 94) — 2 units

This course is designed to develop the skills needed to test and adjust specific Cat machine systems on various models supplied by the sponsoring Cat dealers.

### American Government and Institutions

#### (POLSC 001) — 3 units

An introduction to government and political processes at the national, state and local level, POLSC 001 fulfills the Social Science (A) requirements for the AS degree.

### The Film as Literature (ENG 030) — 3 units

A study of the cinema genre with emphasis on artistic and literary values, ENG 030 fulfills the Humanities (C) requirements for the AS degree.

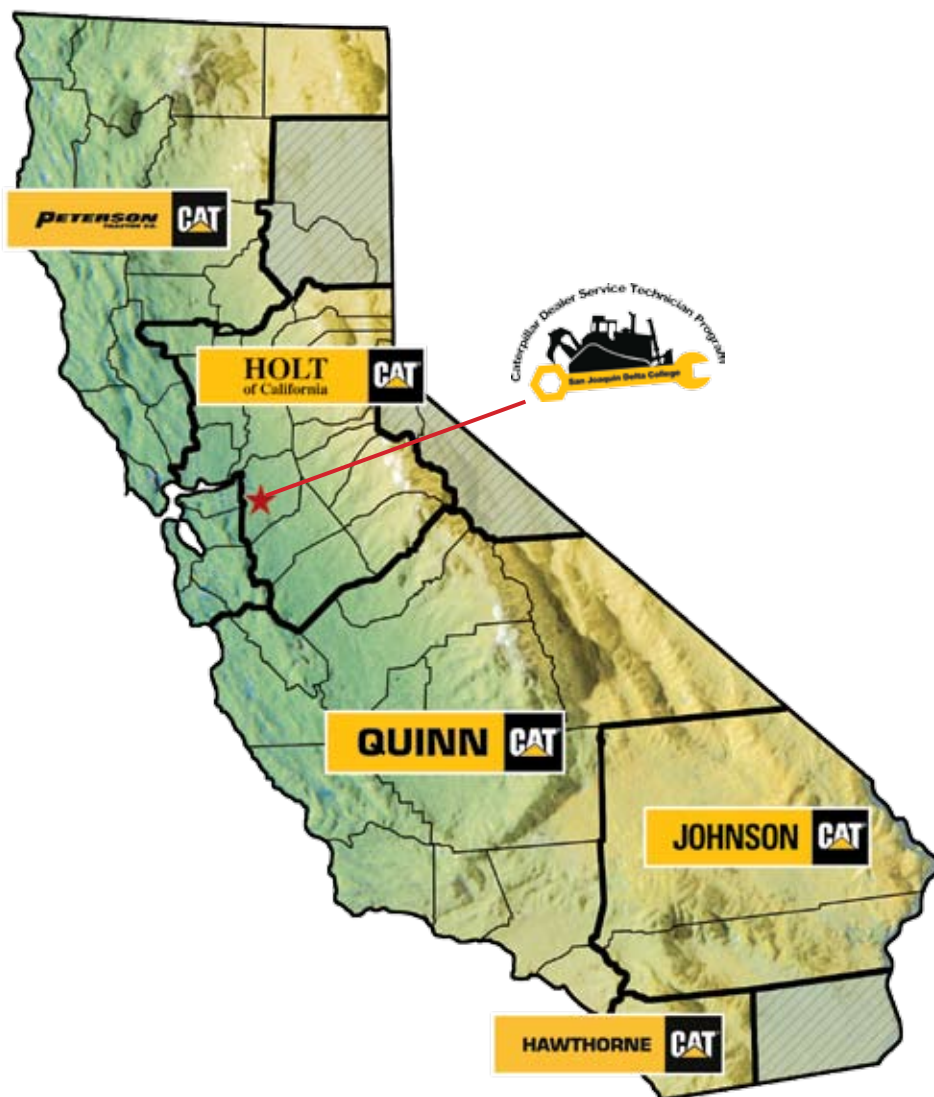






## HOW TO APPLY

- Contact the representative for the Caterpillar dealer in your area (listed below) and request an information packet on the program.
- Return the completed application materials found in the packet.
- Register at Delta College and complete the required assessments.
- Interview with your local Cat dealer and be accepted for sponsorship.



## CONTACT INFORMATION

### HAWTHORNE MACHINERY CO.

#### Jim Champany

General Service Manager

16945 Camino San Bernardo • San Diego, CA 92127

**858.674.7195**

e-mail: [jchampany@hawthornecat.com](mailto:jchampany@hawthornecat.com)

[www.hawthornecat.com](http://www.hawthornecat.com)

### PETERSON TRACTOR CO.

#### Patty Pistello

Employee Relations Manager

955 Marina Blvd. • San Leandro, CA 94577

**510.618.2977**

e-mail: [ppistello@petersonholding.com](mailto:ppistello@petersonholding.com)

[www.petersontractor.com](http://www.petersontractor.com)

### HOLT OF CALIFORNIA

#### Max Jones Jr.

Training Development

7310 Pacific Avenue • Pleasant Grove, CA 95668

**916.991.8234**

e-mail: [mjones@holtca.com](mailto:mjones@holtca.com)

[www.holtca.com](http://www.holtca.com)

### QUINN COMPANY

#### Kimberly Newton

Senior Recruiter

10006 Rose Hills Rd. • City of Industry, CA 90601

**562.463.4036**

e-mail: [knewton@quinncompany.net](mailto:knewton@quinncompany.net)

[www.quinncompany.com](http://www.quinncompany.com)

### JOHNSON MACHINERY

#### Tracy Chaffin

Human Resources Manager

800 East La Cadena Dr. • Riverside, CA 92507

**951.774.3289**

e-mail: [chaffin\\_tracy@johnson-machinery.com](mailto:chaffin_tracy@johnson-machinery.com)

[www.johnson-machinery.com](http://www.johnson-machinery.com)

### SAN JOAQUIN DELTA COLLEGE

5151 Pacific Avenue • Stockton, CA 95207

[www.deltacollege.edu](http://www.deltacollege.edu)