

Program (DIES) - Diesel Technology Cert CT.3134

Program Catalog Summary:

Certificate:

SC Program: CT.3134

PROGRAM DESCRIPTION: This curriculum prepares the student for entry into the mechanic trade related to heavy equipment and diesel engines. Award of apprenticeship credit for completion of the program will depend on the employer, local union regulations, aptitude of student, as well as the curriculum completed.

This certificate is approved through the California Community College Chancellor's Office. Upon satisfactory completion of the listed requirements and filing an application for graduation with Admissions and Records, the student's transcript will reflect completion of this certificate.

PROGRAM LEARNING OUTCOMES:

Upon successful completion of this certificate, the student should be able to:

1. Explain the basic theory of the subject matter or system for the course of instruction based on industry standards.
2. Analyze a scenario based upon an equipment system failure/problem/ complaint.
3. Employ a systematic approach to troubleshooting a system malfunction and prepare a solution.
4. Demonstrate the correct tools/supplies required to diagnose/repair a malfunction.
5. Verify if the path of repair was correct by testing and/or completing a work order/report.

GAINFUL EMPLOYMENT INFORMATION: For information about our graduation rates, the median debt of students who completed this certificate, and other important information, please visit our website at http://www.shastacollege.edu/bait_dies_gainful_employment/.

CERTIFICATE REQUIREMENTS:

DIES 48 Hydraulics 3.5
DIES 49 Advanced Hydraulics 3
DIES 94 Worksite Learning for Diesel Technology 1-4
DIES 160 Diesel Engine Electronic Control 4
DIES 161* Diesel Technology Field Training 2
DIES 162 Heavy Duty Power Train 4
DIES 164 Diesel Performance Analysis 4
DIES 166* Diesel Engines 6
DIES 170 Heavy Duty Braking Systems 4
ENGL 190 Reading & Writing II 4
INDE 1 Career Planning for Industrial Tech. 1
MATH 100 Technical Applications of Mathematics 3
WELD 70 Beginning Welding 3
WELD 73, 170, 171, 174, 175 or 178 3
TOTAL UNITS FOR CERTIFICATE 45.5 – 48.5

Fall 2020

PRIOR PROGRAM REVIEW REFLECTION (If applicable)

Term and Year of Previous Review: Fall 2018

Discuss any changes to the program as a result of the previous program review: The Diesel Program is still moving forward with

the AED (Associated Equipment Distributors) accreditation and will have the final program evaluation taking place spring 2021. This will give us access to many industry leaders and will allow us to assess our students through a third party assessment system.

Resources Received or Requested: Received many new training aids through SWF (Strong Work force) Funding and additional training equipment from industry partners.

Freightliner Medium Duty Truck partially paid for by Perkins funding and monies from Daimler Trucks North America and Redding Freightliner.

Continued funding of additional full time instructor for the Diesel Program through SWF.

New truck brake simulator demonstration unit and drive line angle training tool.

CURRENT PROGRAM REVIEW

Who completed this form?: Ishmael Rivas

Participation in completing this report: Other (such as counselors-outside area faculty-deans)

Alignment with Mission: Describe how the program contributes to the Shasta College Mission: The Diesel Program continues to work with our local industry partners to offer high quality relevant training. The students that are hired from the diesel program are able to use their newly acquired skill sets in the workplace earning a living wage.

Discuss some of the program successes and benefits to the students and/or community: Diesel students continue to find employment upon completion of the program and have recently landed jobs with Ryder Trucks, Redding Freightliner, NorCal Kenworth, Dave's Tractor, and many other businesses in the area Shasta College serves. With starting pay for some off these students of over \$24 an hour we are growing the workforce for our area.

List each PLO and write a brief narrative summary analysis discussing outcomes for each of them.: PROGRAM LEARNING OUTCOMES:

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3. Employ a systematic approach to troubleshooting a system malfunction and prepare a solution.
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5. Verify if the path of repair was correct by testing and/or completing a work order/report.

Describe how this program supports a transfer pathway to CSU or UC: This Program is not set up currently with a pathway to CSU or UC it is designed for students entering the workforce immediately upon completion. We are looking into some articulation agreements with some of the schools that offer a Bachelors in diesel such as Centralia College and MSU Northern.

Specify Labor Market Demand (for CTE programs): The forecasted demand in this industry has changed due to the COVID Pandemic. The growth in this industry was much higher in the last review (2018) and is expected to remain pretty much flat over the next 5 years. There is still a great need out there for Diesel Technicians as the labor force ages and retires. Many of our students are hired before completing the program if they show any potential at all.

PROGRAM DATA ANALYSIS

CURRICULUM

Review of courses with prerequisites: With such a small number of faculty in this program (2 people) we discuss any changes needed on a semester to semester basis. We will be updating many of our courses to better fit our incoming student population and will hopefully be able to allow more CPL (Credit for Prior Learning) as a result.

Challenges to offering key courses: The majority of the courses are only offered once a year due to student enrollment numbers. If we can grow the program overall we will move towards a model allowing the classes to be offered over spring and fall semesters. Also as demand grows we would like to offer a night class version of the degree allowing our students to complete the degree while working full time.

Course changes: No new title changes but we have started offering a new course Diesel 169 that has been successful and allows us to move ahead with our AED accreditation process. We are also looking at the option of requiring some prerequisites or corequisites for courses as our students are entering the program with less and less technical skills.

SUMMARY

Changes or improvements needed based on the analysis above: The faculty needs to continue to modernize the curriculum to stay current with industry changes and demand. More industry involvement needs to take place to better set up a school to employment pipeline for our students. Additional recruiting and outreach needs to take place to increase the diversity and overall numbers for the program.

Note any resources you intend to request through the Area Planning process to improve the program: We will be going through the AED accreditation this Spring and expect to have a list of additional training aids needed after the review period.

Most likely additional Hydraulic and machine specific training aids and demonstration units.

****BELOW TO BE COMPLETED BY THE PROGRAM REVIEW COMMITTEE****

PROGRAM AWARD

Award Type	Program Type	2015-16	2016-17	2017-18	2018-19	2019-20
Certificate	Diesel Technology	5	3	5	1	1
Grand Total		5	3	5	1	1

COURSE STATISTICS

		Academic Year				
		2015-16	2016-17	2017-18	2018-19	2019-20
DIES-48	# Sections	4	4	7	5	5
	Capacity	100	100	174	125	125
	Census Enrl	97	97	114	114	111
	Fill Rate	97.0%	97.0%	65.5%	91.2%	88.8%
	FTES	14.4	14.6	17.5	16.9	24.1
	FTEF	1.1	1.1	1.9	1.4	1.8
	FTES/FTEF	13.1	13.3	9.1	12.3	13.4
	WSCH	432.00	438.00	524.00	506.00	722.00
	DualEnrSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
ITV_Secondary	0	0	0	0	0	
DIES-49	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	26	17	13	11	17
	Fill Rate	104.0%	68.0%	52.0%	44.0%	68.0%
	FTES	5.2	3.4	2.6	2.2	3.4
	FTEF	0.3	0.3	0.3	0.3	0.3
	FTES/FTEF	16.0	10.5	8.0	6.8	10.5
	WSCH	156.00	102.00	78.00	66.00	102.00
	DualEnrSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
ITV_Secondary	0	0	0	0	0	
DIES-94	# Sections	6	5	4	3	4
	Capacity	90	75	60	45	60
	Census Enrl	18	16	16	7	10
	Fill Rate	20.0%	21.3%	26.7%	15.6%	16.7%
	FTES	0.9	0.7	0.5	0.2	0.3
	FTEF	0.0	0.0	0.0	0.0	0.0
	FTES/FTEF					
	WSCH	120.00	95.00	64.00	30.00	44.00
	DualEnrSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
ITV_Secondary	0	0	0	0	0	
DIES-160	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	29	16	22	22	20
	Fill Rate	116.0%	64.0%	88.0%	88.0%	80.0%
	FTES	5.8	3.2	4.6	4.4	4.0
	FTEF	0.4	0.4	0.4	0.4	0.4
	FTES/FTEF	16.6	9.1	13.1	12.6	11.4
	WSCH	174.00	96.00	138.00	132.00	120.00
	DualEnrSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
ITV_Secondary	0	0	0	0	0	

DIES-161	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	20	18	12	11	11
	Fill Rate	80.0%	72.0%	48.0%	44.0%	44.0%
	FTES	1.3	1.1	0.8	0.7	0.7
	FTEF	0.1	0.1	0.1	0.1	0.1
	FTES/FTEF	9.5	8.5	6.0	5.5	5.5
	WSCH	39.00	35.00	25.00	22.00	22.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
DIES-162	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	28	22	21	22	18
	Fill Rate	112.0%	88.0%	84.0%	88.0%	72.0%
	FTES	5.6	4.4	4.4	4.4	3.6
	FTEF	0.4	0.4	0.4	0.4	0.4
	FTES/FTEF	16.0	12.6	12.6	12.6	10.3
	WSCH	168.00	132.00	132.00	132.00	108.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
DIES-164	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	28	24	21	24	23
	Fill Rate	112.0%	96.0%	84.0%	96.0%	92.0%
	FTES	5.6	4.8	4.4	4.8	4.6
	FTEF	0.4	0.4	0.4	0.4	0.4
	FTES/FTEF	16.0	13.7	12.6	13.7	13.1
	WSCH	168.00	144.00	132.00	144.00	138.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
DIES-166	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	21	17	17	12	13
	Fill Rate	84.0%	68.0%	68.0%	48.0%	52.0%
	FTES	8.4	6.8	6.8	4.8	5.2
	FTEF	0.7	0.7	0.7	0.7	0.7
	FTES/FTEF	12.9	10.5	10.5	7.4	8.0
	WSCH	252.00	204.00	204.00	144.00	156.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
DIES-170	# Sections	1	1	1	1	1
	Capacity	25	25	25	25	25
	Census Enrl	25	22	15	21	17

	Fill Rate	100.0%	88.0%	60.0%	84.0%	68.0%
	FTES	5.0	4.8	3.0	4.2	3.4
	FTEF	0.4	0.4	0.4	0.4	0.4
	FTES/FTEF	14.3	13.7	8.6	12.0	9.7
	WSCH	150.00	144.00	90.00	126.00	102.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
ENGL-190	# Sections	34	28	23	11	
	Capacity	856	648	560	235	
	Census Enrl	649	551	458	223	
	Fill Rate	75.8%	85.0%	81.8%	94.9%	
	FTES	86.1	75.2	61.8	29.6	
	FTEF	8.6	6.6	5.6	2.4	
	FTES/FTEF	10.0	11.4	11.1	12.3	
	WSCH	2,588.00	2,262.00	1,861.00	888.00	
	DualEnr1Sec	0	0	0	0	
	OnlineSec	0	0	0	0	
	ITV_Secondary	5	6	4	3	
INDE-1	# Sections	3	3	4	4	4
	Capacity	100	100	125	120	120
	Census Enrl	76	71	91	95	94
	Fill Rate	76.0%	71.0%	72.8%	79.2%	78.3%
	FTES	5.1	4.9	6.1	6.3	6.3
	FTEF	0.3	0.3	0.4	0.4	0.4
	FTES/FTEF	15.6	15.0	14.1	14.7	14.5
	WSCH	152.00	146.00	182.00	190.00	188.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
MATH-100	# Sections	6	5	4	6	5
	Capacity	98	92	98	134	102
	Census Enrl	77	90	99	110	85
	Fill Rate	78.6%	97.8%	101.0%	82.1%	83.3%
	FTES	7.7	9.2	10.3	11.0	8.5
	FTEF	0.6	0.6	0.5	0.7	0.6
	FTES/FTEF	12.8	16.5	20.3	14.7	15.0
	WSCH	231.00	276.00	309.00	330.00	255.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	3	2	1	2	2
WELD-70	# Sections	11	12	11	10	12
	Capacity	183	195	181	183	175
	Census Enrl	184	190	184	184	175
	Fill Rate	100.5%	97.4%	101.7%	100.5%	100.0%
	FTES	35.9	38.5	36.8	35.2	31.9
	FTEF	1.7	2.0	2.0	2.0	2.0

	FTES/FTEF	20.7	19.7	18.9	18.1	16.4
	WSCH	973.00	1,115.00	1,099.00	1,026.00	955.00
	DualEnr1Sec	5	6	5	4	6
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-73	# Sections	3	4	4	4	4
	Capacity	45	60	60	75	80
	Census Enrl	55	69	77	83	87
	Fill Rate	122.2%	115.0%	128.3%	110.7%	108.8%
	FTES	11.0	14.2	15.8	16.4	17.4
	FTEF	0.6	0.9	1.1	1.1	1.3
	FTES/FTEF	18.7	15.5	14.4	14.8	13.4
	WSCH	330.00	426.00	474.00	492.00	522.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-170	# Sections	2	2	2	2	3
	Capacity	45	40	40	40	60
	Census Enrl	48	49	49	50	61
	Fill Rate	106.7%	122.5%	122.5%	125.0%	101.7%
	FTES	9.6	10.2	9.8	10.0	12.2
	FTEF	0.3	0.5	0.4	0.5	0.8
	FTES/FTEF	30.9	20.8	22.4	20.4	16.2
	WSCH	288.00	306.00	294.00	300.00	366.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-171	# Sections	2	2	2	2	2
	Capacity	40	40	40	40	40
	Census Enrl	48	54	54	42	47
	Fill Rate	120.0%	135.0%	135.0%	105.0%	117.5%
	FTES	9.6	11.0	11.2	8.4	9.4
	FTEF	0.4	0.4	0.4	0.4	0.4
	FTES/FTEF	22.0	25.9	26.4	19.8	21.7
	WSCH	288.00	330.00	336.00	252.00	282.00
	DualEnr1Sec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-174	# Sections	2	3	3	3	3
	Capacity	40	60	60	60	60
	Census Enrl	47	63	65	72	65
	Fill Rate	117.5%	105.0%	108.3%	120.0%	108.3%
	FTES	9.4	12.6	13.4	14.4	13.0
	FTEF	0.6	1.0	1.0	1.0	1.0
	FTES/FTEF	15.7	12.9	13.7	14.8	13.3
	WSCH	282.00	378.00	402.00	432.00	390.00
	DualEnr1Sec	0	0	0	0	0

	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-175	# Sections	3	2	2	3	3
	Capacity	55	40	40	60	50
	Census Enrl	60	40	43	64	55
	Fill Rate	109.1%	100.0%	107.5%	106.7%	110.0%
	FTES	12.0	8.2	8.6	12.8	11.0
	FTEF	0.6	0.7	0.7	1.0	0.8
	FTES/FTEF	18.6	12.6	13.2	13.1	14.6
	WSCH	360.00	246.00	258.00	384.00	330.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
WELD-178	# Sections	2	2	2	3	2
	Capacity	40	40	40	50	40
	Census Enrl	43	43	48	58	46
	Fill Rate	107.5%	107.5%	120.0%	116.0%	115.0%
	FTES	8.6	8.6	9.6	11.6	9.2
	FTEF	0.4	0.7	0.7	0.8	0.7
	FTES/FTEF	19.4	13.2	14.8	15.4	14.2
	WSCH	258.00	258.00	288.00	348.00	276.00
	DualEnrlSec	0	0	0	0	0
	OnlineSec	0	0	0	0	0
	ITV_Secondary	0	0	0	0	0
Grand Total	# Sections	85	79	75	63	54
	Capacity	1,867	1,665	1,653	1,342	1,087
	Census Enrl	1,579	1,469	1,419	1,225	955
	Fill Rate	84.6%	88.2%	85.8%	91.3%	87.9%
	FTES	247.2	236.4	228.0	198.4	168.2
	FTEF	17.9	17.1	17.1	14.1	12.1
	FTES/FTEF	13.8	13.8	13.3	14.0	13.9
	WSCH	7,409.00	7,133.00	6,890.00	5,944.00	5,078.00
	DualEnrlSec	5	6	5	4	6
	OnlineSec	0	0	0	0	0
	ITV_Secondary	8	8	5	5	2