

# ANNUAL

REPORT OF PROGRAM DATA

# 2023



UNIVERSITY *of* HAWAI'I

# HAWAI'I

COMMUNITY COLLEGE

2023 Annual Report of Program Data  
**Diesel Mechanics - (DISL)**

## 1. Program or Unit Mission

This program prepares the student for employment as a skilled tradesperson who troubleshoots, maintains, and repairs various types of diesel engines, trucks, tractors, boats, and other heavy equipment.

## 2. Program Student Learning Outcomes or Unit/Service Outcomes

- Function safely in a heavy equipment shop environment.
- Demonstrate ability to communicate effectively to gather and convey information.
- Apply theory and principles for proper diagnosis, repair, and maintenance in the heavy-duty truck equipment industry.
- Practice the minimum essential mental, physical, and behavioral skills necessary to maintain professional proficiency.
- Work collaboratively with others as well as independently.

## 3. Analysis of the Program/Unit

The following analysis summarizes the data for the Diesel Mechanics Program at Hawaii Community College over the past three years. This review provides insights into the program's performance, efficiency, effectiveness, and specific quantitative indicators.

#	Demand Indicators	2018-19	2019-20	2020-21	2021-22	2022-23
1.	New & Replacement Positions (State)	139	147	119	115	113
2.*	New & Replacement Positions (County Prorated)	18	22	16	13	12
3.	Number of Majors	30	30	28	24	26
3a.	Number of Majors Native Hawaiian	15	16	20	12	12
3b.	Fall Full-Time	77%	87%	86%	82%	96%
3c.	Fall Part-Time	23%	13%	14%	18%	4%
3d.	Fall Part-Time who are Full-Time in System	0%	0%	0%	0%	0%
3e.	Spring Full-Time	72%	89%	78%	100%	79%
3f.	Spring Part-Time	28%	11%	22%	0%	21%
3g.	Spring Part-Time who are Full-Time in System	0%	0%	0%	0%	0%
4.	SSH Program Majors in Program Classes	614	720	592	532	608
5.	SSH Non-Majors in Program Classes	8	44	0	0	0
6.	SSH in All Program Classes	622	764	592	532	608
7.	FTE Enrollment in Program Classes	21	25	20	18	20
8.	Total Number of Classes Taught	9	9	9	9	9

The demand for new and replacement positions in the state decreased from 164 (2018-19) to 140 (2021-22) and then further to 139 (2022-23). In terms of county prorated positions, there was a decline from 27 (2019-20) to 14 (2021-22) and remained the same at 14 (2022-23).

The number of majors showed a decreasing trend, from 21 (2019-20) to 12 (2021-22), with a slight increase to 16 (2022-23). The number of Native Hawaiian majors followed a similar trend, decreasing from 15 (2019-20) to 8 (2021-22), then increasing to 13 (2022-23). Fall Full-Time enrollment showed a significant increase from 86% (2019-20) to 100% (2022-23). Fall Part-Time enrollment decreased from 14% (2019-20) to 0% (2022-23). Spring Full-Time enrollment increased

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from 90% (2019-20) to 93% (2022-23). Spring Part-Time enrollment decreased from 10% (2019-20) to 7% (2022-23).

Efficiency Indicators:  
The average class size decreased from 17 (2019-20) to 11 (2021-22) before increasing to 16 (2022-23). The fill rate improved

#	Efficiency Indicators	2018-19	2019-20	2020-21	2021-22	2022-23
9.	Average Class Size	19	17	12	11	16
10.*	Fill Rate	97.4%	87.2%	71.9%	68.8%	96.9%
11.	FTE BOR Appointed Faculty	1	1	1	1	1
12.*	Majors to FTE BOR Appointed Faculty	20	21	16	12	16
13.	Majors to Analytic FTE Faculty	20	21	16	12	16
13a.	Analytic FTE Faculty	1	1	1	1	1
14.	Overall Program Expenditures	\$188,431	\$102,228	\$104,674	\$105,960	\$107,616
14a.	General Funded Budget Allocation	\$83,364	\$86,791	\$104,549	\$105,158	\$105,456
14b.	Special/Federal Budget Allocation	0	0	0	0	0
14c.	Tuition and Fees	\$105,067	\$15,437	\$125	\$802	\$2,160
15.	Cost per SSH	\$413	\$251	\$379	\$401	\$289
16.	Number of Low-Enrolled (<10) Classes	0	0	0	0	0

significantly, from 68.8% (2021-22) to 96.9% (2022-23). The program consistently maintained one full-time equivalent (FTE) BOR appointed faculty. The cost per SSH showed fluctuations over the years, ranging from \$251 (2019-20) to \$401 (2021-22) and then decreasing to \$289 (2022-23).

Successful completion (Equivalent C or Higher) rates were consistently high, except for 2022-23 when it decreased to 90%. There was one withdrawal (Grade = W) in 2022-23. Persistence from Fall to Spring increased from 80% (2020-21) to 100% (2021-22) before dropping to 82% (2022-23). Persistence from Fall to Fall fluctuated, with a significant decrease from 73% (2020-21) to 17% (2021-22) before recovering to 53% (2022-23). The number of unduplicated degrees/certificates awarded decreased to zero in 2022-23.

The program met the postsecondary placement and earned recognized credential goals but did not

#	Performance Indicators	2018-19	2019-20	2020-21	2021-22	2022-23
35.	Number of Degrees and Certificates	2	25	2	17	0
36.	Number of Degrees and Certificates Native Hawaiian	2	18	1	12	0
37.	Number of Degrees and Certificates STEM	Not STEM	Not STEM	Not STEM	Not STEM	Not STEM
38.	Number of Pell Recipients <sup>1</sup>	1	18	2	12	0
39.	Number of Transfers to UH 4-yr	0	0	1	0	0

meet the nontraditional program concentration goal in any year.

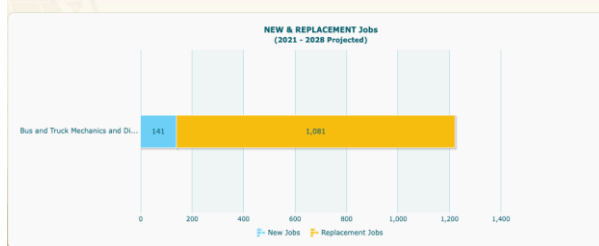
The number of degrees and certificates awarded showed a

significant decrease from 25 (2019-20) to 17 (2021-22) and then dropped to zero in 2022-23. Again, the program does not graduate students every year.

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Bachelor	Associate	Certificate	Certificate Other
Median earnings of students in this Diesel Mechanics Technology program who were found working in Hawaii at least 3 quarters and who earned at least full-time minimum wage in the first, second, and third year after graduating or leaving (includes: BAS).	Median earnings of students in this Diesel Mechanics Technology program who were found working in Hawaii at least 3 quarters and who earned at least full-time minimum wage in the first, second, and third year after graduating or leaving (includes: AA, AAS, AS, ATS, APC).	Median earnings of students in this Diesel Mechanics Technology program who were found working in Hawaii at least 3 quarters and who earned at least full-time minimum wage in the first, second, and third year after graduating or leaving (includes: CA).	Median earnings of students in this Diesel Mechanics Technology program who were found working in Hawaii at least 3 quarters and who earned at least full-time minimum wage in the first, second, and third year after graduating or leaving (includes: CC, CC).
students graduated	students graduated	students graduated	students completed
students did not graduate	students did not graduate	students did not graduate	students did not complete

NOTE: \* Data suppressed due to small cell size  
If you have questions about the data or presentation of the data, please email [uhccdata@hawaii.edu](mailto:uhccdata@hawaii.edu).  
Information about the [data source](#).



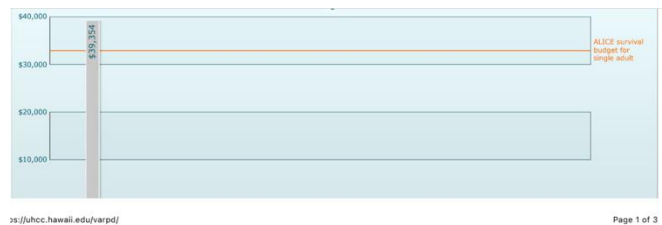
The number of Pell recipients varied but reached zero in 2022-23.

In summary, the Diesel Mechanics Program at Hawaii Community College experienced fluctuations in various indicators over the past three years. There were improvements in enrollment and fill rates. The fluctuations of the drop in certificate earnings are due to the program running as cohorts, which means students graduate every other year. Previous certificate holding students sometimes don't take the electives and opt for a certificate rather than the Associates & Applied Science Degree (AASD). Then students return as working adults to take

classes on a part time bases continuing towards an AASD as seen in the 2018-19 and 2021-22 Academic Years.

The report provides insight into the median earnings of program graduates who secured employment in Hawaii at least three quarters after graduation. The earnings vary depending on the type of credential attained. Students securing employment after graduation make approximately \$39,354 per year.

The data indicates the number of new jobs (141) and replacement jobs (1,081) in the Bus and Truck Mechanics and Diesel Engine Specialists field. This indicates the employment prospects for our graduates are promising.

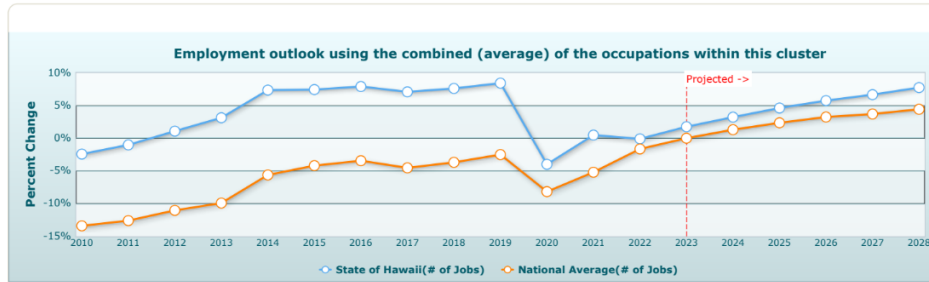


The chart presented in the 2023 Annual Report of Program Data illustrates the percent change in employment outlook for the Diesel Mechanics Technology program at the University of Hawaii

#### Workforce Analytics

Hawai'i Community College's **Diesel Mechanics Technology** program prepares students for entry level employment in...

- 49-3031 - Bus and Truck Mechanics and Diesel Engine Specialists ([view profile](#))



Community Colleges from 2010 to 2028. The data shows a consistent negative trend in employment outlook, with a -15% decline over this period. However, the trend changes, charting upward for the next 5 years.

The steady increase in employment outlook suggests demand will rise. Industry demands fluctuate and the changing employment landscape shows we have to monitor employment trends and look at ways to continually adapt.

## 4. Action Plan

Action Strategy 3: Anticipate and align curricula with community and workforce needs.

Work on integrating Commercial Drivers License (CDL) to qualifying students. This requires modification of curriculum, developing new curriculum, and designing a pathway for students who qualify and don't for CDL. Obtaining a CDL permit requires students to be at least 18 years of age (must be 21 years old to obtain CDL license), submission of Department of Transportation Certificate, which verifies that you meet the Medical and Physical requirements, and passing the required vision test with a minimum of 20/40 in both eyes. This is a partnership with EDvance and we will continue to find opportunities, such as new vehicle and subject matter experts, so we can provide CDL training to both non-credit and credit students.

Action Strategy 1: Strengthen the pipeline from K-12 to the university to improve college readiness and increase college attendance.

Continue to participate in outreach activities presented. However, additional time and resources are being requested (see below).

## 5. Resource Implications

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I am requesting additional resources for my program/unit.

Taking into account the future rise in the employment outlook and the program's unique structure of accepting students every other year and graduating students every other year, the situation becomes more complex. With a biennial admission and graduation pattern, the program is not able to increase enrollment. Having an additional faculty that is responsible for another cohort of students will increase enrollment and graduates needed in the upcoming years. Faculty: \$75,000 per year.

To align with the current trends within the industry, we wrote and received a Diesel Engine Dynamometer Cell to modernize, and an included diesel exhaust after treatment training module from the Perkins 2023-24 proposal. We are in the process of acquiring a clutch, injectors, and a Jacobs Engine Brake Overhaul kit to install in our Kenworth T-800 B Diesel truck with 600,000+ miles. However, due to vehicle mileage, the engine needs continual repairs and servicing, which takes time and resources. Although an older vehicle presents problem-solving lessons for students, it is not ideal for learning when vehicle is not operating. A new diesel truck will offer several advantages as training tools for students when compared to older vehicles and traditional trainers. Having a new truck will provide students with the opportunity to learn in a real-world setting, gain practical experience on newer equipment, which makes the transition to the workforce smoother. Diesel trucks are physical, tangible objects that students can interact with directly. This hands-on experience can be more engaging and effective for many learners than theoretical instruction or virtual trainers. These are complex machines with various systems, including engines, transmissions, brakes, and electrical systems and allows students to learn about these systems comprehensively. Diesel Truck: \$180,000

Finally, some professions, such as commercial truck driving, require students to obtain specific certifications or licenses. Training on diesel trucks can help students fulfill these requirements more effectively. As a one-faculty program, it becomes extremely challenging to modify courses and the program when tending to shop safety takes priority. For several years, I have requested a Lab Coordinator position. Managing a diesel lab/shop that includes equipment, trucks, and a building in need of maintenance while lacking a dedicated lab person can be a significant challenge. Safety is paramount in a diesel shop. Inadequate maintenance and safety checks of tools, equipment, vehicles and facility can lead to accidents and injuries. Ensuring the safety of both employees and students, without a lab person, is challenging. The diesel industry is subject to various regulations and standards related to emissions, safety, and environmental concerns. Compliance can be complex, and without a lab person or dedicated staff, ensuring that the shop adheres to these regulations is unacceptable. A Lab Coordinator will assist in managing the resources, tools, and spare parts in the diesel shop. The Lab Coordinator will assist with tracking inventory and ensuring the availability of necessary tools and equipment. In addition, maintaining the physical

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infrastructure of the shop is a significant challenge and having support would alleviate additional duties that faculty have assumed since the college has not provided resources. Repairs and renovations are needed to ensure a safe and functional workspace. Finally, if accidents occur, having a lab person who can respond quickly and efficiently is invaluable. Without this person, the shop may struggle to handle emergencies effectively. Requesting an APT to manage Lab Coordinator duties \$57,000.