

DISL: Diesel Mechanics

2024 COMPREHENSIVE Report of Program Data

Diesel Mechanics: DISL AY21-22 through AY23-24



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

DISL Program Learning Outcomes	ILO Alignment
PLO 1: Function safely in a heavy equipment shop environment.	ILOs 1, 2, 5
PLO 2: Demonstrate ability to communicate effectively to gather and convey information.	ILOs 1, 2, 3, 4
PLO 3: Apply theory and principles for proper diagnosis, repair, and maintenance in the heavy-duty truck equipment industry.	ILOs 1, 2
PLO 4: Practice the minimum essential mental, physical, and behavioral skills necessary to maintain professional proficiency.	ILOs 1, 2, 3, 5, 6
PLO 5: Work collaboratively with others as well as independently.	ILOs 1, 3, 4, 5

The Program was not able to conduct course assessments during the period of this Review, but assessments will be addressed in the action plan and resource request in order to update the Program's assessment schedule and assist faculty with conducting and reporting assessments.

3. Analysis of the Program/Unit

Relative to the period of this Comprehensive Review, use this section to discuss the annual reports of program data (ARPD data) and/or any other data used to assess your program or unit in terms of demand, efficiency, and effectiveness and with respect to the goals of most recent (last) Comprehensive Program/Unit Review. What program changes have occurred? Discuss significant program or unit actions (new certificate(s), stopouts/unit, gain/loss of position(s), etc.).

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DISL Program ARPD URL:

<https://uhcc.hawaii.edu/varpd/index.php?y=2024&c=HAW&t=CTE&p=3000>

The following analysis summarizes the data for the Diesel Mechanics Program at Hawai'i Community College over the past three years covered by this Review. This analysis provides insights into the program's performance, efficiency, effectiveness, and specific quantitative indicators. The DISL Program runs on a two-year cohort model. For the efficiency indicators, the average class size trends indicate that the decrease from 12 to 11 in 2021-2022 may signal student retention or enrollment challenges. The subsequent increase in 2022-2023 aligns with the introduction of a new cohort, suggesting successful recruitment efforts. However, the significant drop in 2023-2024 to an average of 9 students enrolled points to potential issues such as external factors affecting enrollment.

#	Efficiency Indicators	2019-20	2020-21	2021-22	2022-23	2023-24
9.	Average Class Size	17	12	11	16	9
10.*	Fill Rate	87.2%	71.9%	68.8%	96.9%	56.3%
11.	FTE BOR Appointed Faculty	1	1	1	1	1
12.*	Majors to FTE BOR Appointed Faculty	21	16	12	16	16
13.	Majors to Analytic FTE Faculty	21	16	12	16	16
13a.	Analytic FTE Faculty	1	1	1	1	1
14.	Overall Program Expenditures	\$102,228	\$104,674	\$105,960	\$107,616	\$118,342
14a.	General Funded Budget Allocation	\$86,791	\$104,549	\$105,158	\$105,456	\$113,087
14b.	Special/Federal Budget Allocation	0	0	0	0	0
14c.	Tuition and Fees	\$15,437	\$125	\$802	\$2,160	\$5,255
15.	Cost per SSH					
16.	Number of Low-Enrolled (<10) Classes	0	0	0	0	2

In terms of fill rate, the metrics reveal that in 2021-2022, the fill rate was at 68.8%, reflecting under-enrollment or lower-than-expected student engagement. This improved significantly in 2022-2023 to 96.9%, primarily due to the influx of the new cohort. However, the fill rate decreased again in 2023-2024, driven by variable student issues impacting retention and enrollment. The increase in 2022-2023 underscores the positive impact of cohort enrollment strategies, while the drop in 2023-2024 highlights trends that may be influenced by personal student challenges. The underlying challenges were evident as notable portions of students didn't return during the fall of 2022 and spring of 2023. Contributing factors included family income hardships, contracting the COVID-19 Virus, and personal geographic relocation. This highlights the residual effects of the pandemic on student retention and overall program participation. It is crucial to address the factors contributing to student attrition by providing ongoing support as we move forward.

Demand indicators related to job availability, enrollment trends, and course offerings within the program from 2021 to 2024 highlight both stagnation and slight improvements. At the State level, new and replacement positions slightly declined from 214 in 2021-22 to 210 in 2023-24, indicating

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a stagnant job market for graduates. However, county-level positions increased from 20 to 22 during the same period, suggesting localized growth in job availability that may benefit graduates.

Enrollment trends show that declared majors decreased from 12 in 2021-22 to 10 in 2022-23 but stabilized at 16 in the subsequent years, indicating a recovery in student interest. Full-time enrollment peaked at 100% in 2022-23 but dropped to 69% in 2023-24, with spring enrollment

falling from 93% to 58%. These fluctuations reflect the impact of the cohort model, which can lead to variable enrollment numbers based on cohort size and composition. Additionally, the figures do not account for students opting out to pursue alternative credentials, affecting overall enrollment data. Student credit hours (SSH) for majors fell sharply from 372 in 2022-23 to 216 in 2023-24, which is not uncommon in a cohort model where enrollment expectations fluctuate. Meanwhile, the total number of classes taught remained stable at two due to being managed by a single faculty member, which may restrict responsiveness to student needs. Increasing engagement with local industries is crucial to align program offerings with job market demands. Implementing targeted retention strategies, reviewing the curriculum for relevance, and exploring opportunities to expand course offerings will help meet student interests. Regularly analyzing enrollment and SSH trends alongside employment outcomes will inform necessary program adjustments, enhancing responsiveness to both market demands and student needs.

#	Demand Indicators	2019-20	2020-21	2021-22	2022-23	2023-24
1.	New & Replacement Positions (State)	298	228	214	214	210
2.*	New & Replacement Positions (County Prorated)	42	24	20	24	22
3.	Number of Majors	21	16	12	16	16
3a.	Number of Majors Native Hawaiian	15	11	8	13	13
3b.	Fall Full-Time	86%	88%	92%	100%	69%
3c.	Fall Part-Time	14%	13%	8%	0%	31%
3d.	Fall Part-Time who are Full-Time in System	5%	0%	0%	0%	0%
3e.	Spring Full-Time	90%	80%	92%	93%	58%
3f.	Spring Part-Time	10%	20%	8%	7%	42%
3g.	Spring Part-Time who are Full-Time in System	0%	0%	0%	0%	0%
4.	SSH Program Majors in Program Classes	408	276	264	372	216
5.	SSH Non-Majors in Program Classes	0	0	0	0	0
6.	SSH in All Program Classes	408	276	264	372	216
7.	FTE Enrollment in Program Classes	14	9	9	12	7
8.	Total Number of Classes Taught	2	2	2	2	2

NOTE: New & Replacement jobs updated ([View Methodology](#)).

The Diesel Program has effectively met its outcomes of non-traditional students, certificate recognition, and post-secondary placements. Overall, it seems the program fosters a supportive environment that meets the diverse needs of its students.

#	Perkins Indicators	Goal	Actual	Met
29.	1P1 Postsecondary Placement	0	0	Met
30.	2P1 Earned Recognized Credential	35	100	Met
31.	3P1 Nontraditional Program Concentration	12	19	Met
32.	Placeholder - intentionally blank	N/A	N/A	N/A
33.	Placeholder - intentionally blank	N/A	N/A	N/A
34.	Placeholder - intentionally blank	N/A	0	N/A

The performance indicators from the academic years 2021-22, 2022-23, and 2023-24 illustrate significant trends in the outcomes of our academic program. The total number of degrees and certificates conferred exhibited notable fluctuations, with peaks observed in both 2021-22 and 2023-24. This trend was mirrored by the number of awards granted to Native Hawaiian students, indicating an overall pattern in program engagement and success. The academic program operates on a cohort model, leading to a biennial graduation schedule that allows for targeted support and community-building among students, thereby enhancing their educational experience. While the program shows promising graduation rates, particularly among Native Hawaiian students, in terms of effectiveness indicators, the successful completion rate remained high at 100% for 2021-22 and 2022-23 but dropped to 90% in 2022-23 before returning to 100% in 2023-24, indicating inconsistency in student success. Also, keep in mind, as mentioned before, the residual impacts of the Covid-19 Pandemic. Notably, a withdrawal was recorded in 2022-23, but zero withdrawals were reported in 2023-24, suggesting improved student support or engagement.

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The persistence rate from fall to spring improved from 82% in 2022-23 to 92% in 2023-24, indicating enhanced retention efforts, although fall-to-fall persistence remains low, fluctuating between 17% and 20%. Ongoing support and resources will be vital in mitigating these challenges and sustaining academic success moving forward.

There was a notable increase in the number of unduplicated degrees and certificates awarded, rising from 0 in 2022-23 to 9 in 2023-24, reflecting positive outcomes with student cohort achievement. However, transfer rates to four-year institutions remain

#	Effectiveness Indicators	2019-20	2020-21	2021-22	2022-23	2023-24
17.	Successful Completion (Equivalent C or Higher)	100%	100%	100%	90%	100%
18.	Withdrawals (Grade = W)	0	0	0	1	0
19.*	Persistence Fall to Spring	90%	80%	100%	82%	92%
19a.	Persistence Fall to Fall	23%	73%	17%	53%	20%
20.*	Unduplicated Degrees/Certificates Awarded	17	2	11	0	9
20a.	Degrees Awarded	8	2	6	0	3
20b.	Certificates of Achievement Awarded	17	0	11	0	9
20c.	Advanced Professional Certificates Awarded	0	0	0	0	0
20d.	Other Certificates Awarded	0	0	0	0	0
21.	External Licensing Exams Passed ¹					
22.	Transfers to UH 4-yr	0	1	0	0	0
22a.	Transfers with credential from program	0	1	0	0	0
22b.	Transfers without credential from program	0	0	0	0	0

stagnant, indicating potential growth opportunities in academic articulation agreements, if the student would like to continue a four-year path in another program, the caveat is there are no 4-year diesel mechanic degrees anywhere in the State.

The analysis reveals several key trends and areas of concern. While there are positive developments in job availability and student completion rates, significant declines in enrollment and fill rates, alongside rising expenditures, contribute to these trends. The program will address a need for additional personnel and upscaling new state-of-the-art machines in the action plan.

4. Action Plan

Based on findings in Parts 1-3: How well has the program/unit met the goals from your most recent (last) Comprehensive Program/Unit Review’s action plan(s)?

For the next Comprehensive Review cycle, up to the next five years, what changes are you making to your action plan(s)? Include external factors affecting the program or unit. Discuss how these recommendations for improvement or actions will guide your program or unit through the next five years until your next Comprehensive Review. Specify how the action plan(s) aligns with the College’s [Mission](#) and the [Ka’ao Ka’ika’i Strategic Plan](#). Be sure to list resources that will be required, if any, in section 5 below.

** CTE programs must include specific action plans for any Perkins Core Indicator for which the program did not meet the performance level.*

The following Action Items align with the College’s Ka’ao Ka’ika’i Strategic Plan:

- **Core Commitment 1: Ka’ika’i Kuleana**
 - Fulfill kuleana to Native Hawaiians and Hawai’i Island
- **Core Commitment 2: Ka’ika’i Haumāna**
 - Develop successful students for a better future. Educate more students, empowering them to achieve their goals and contribute to a civil society.
- **Core Commitment 3: Ka’ika’i Oihana**

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- Meet Hawai'i Island's workforce needs of today and tomorrow. Minimize workforce shortages on Hawai'i Island while preparing students for a global future.
- **Core Commitment 4: Ka'ika'i Noi'i**
 - Diversify Hawai'i Island's economy through innovation and multi-sector partnerships
- **Core Commitment 5: Ka'ika'i Kauhale**
 - Build and Maintain the Wellbeing of the College Kauhale.

Action Item One: Obtain a high-quality industry-standard diesel-engine truck.

This goal seeks to increase students' employability with their graduation certificates and degrees. Employers seek candidates who not only have mechanical skills but also the ability to operate heavy vehicles. A high-quality industry-standard diesel truck allows students to gain hands-on experience with the latest technology and equipment used in the field. This practical training is crucial for developing the technical skills necessary for success in diesel mechanics, as students learn to diagnose, repair, and maintain modern diesel engines and systems. Also, the program can partner with the College's EDvance continuing education office, which consistently has had a difficult time securing a truck for their CDL training. This impedes community members' and students' ability to take a CDL class to attain the certification. Furthermore, the EDvance office has difficulty in attaining a trained instructor for the CDL classes. The solution can be mitigated by attaining a new high-quality truck that can be used both for continued training during the Hawai'i Island CDL driver shortage, and allowing our students to help fill the gaps upon graduation. Additionally, this investment can create partnerships with local businesses and trucking companies that may be able to teach and facilitate internships and job placements for our students. Overall, this strategic investment in equipment and training not only enriches the educational experience but also equips students with essential skills and certifications, positioning them for successful careers in the diesel mechanics field. Furthermore, the CDL certification can be an added micro-credential on student transcripts between non-credit and credited programs. Also, a shop upgrade is necessary to ensure that the students are attaining high-quality training in an updated shop.

Action Item Two: Hire an APT-B Academic Support Coordinator to increase career exploration and internships by developing summer programs and establishing industry collaborations.

Strengthening student support systems is essential, and utilizing APT-B personnel will help address educational and basic needs, promoting holistic health and wellness. Innovative learning experiences, using multiple modalities including CDL, and connecting to learning platforms of UH Systems, allow the outlook for future micro-credentialing access. Furthermore, we will enhance industry partnerships by collaborating with DOE schools and advisory boards to create dual pathways and increase micro-credentialing opportunities. This will involve fostering communication efforts with industry stakeholders to align our program delivery with workforce needs. An APT-B academic support personnel could help to facilitate, coordinate, and attend to administrative operational concerns, and document pathways for career advancement, we will allow the Program to streamline the transition between non-credit and credit programs and support upskilling initiatives, like the CDL certification. We can create a robust educational framework that prepares students for success in an evolving workforce. Immediate action is recommended to initiate recruitment of an APR-B staff member, as well as innovative community outreach efforts, which will ensure we remain aligned with our mission and community responsibilities.

It has become evident that the timely assessment of our courses is crucial for maintaining academic standards and ensuring that our Program meets institutional goals. Currently, the course

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assessment schedule is pending updating and course assessments are being planned to be conducted and reported during the next cycle. The Program’s sole faculty member is working closely with the Institutional Assessment Coordinator to establish an updated assessment schedule for Fall 2024 and going forward for the next two cohort cycles. The timely and effective assessment of courses is essential for our institution's academic integrity and continuous improvement. By coordinating closely with the Assessment Coordinator and advocating for the establishment of an AP-B Academic Support Coordinator position, we can ensure a smoother and more effective assessment cycle for Fall 2024 and beyond. This position will also be necessary to assist the Program during the planned renovation of the DISL shop in the near future. Due to the extensive nature of the renovation, which is planned to include replacing the roof, electrical systems and air filtration systems, all shop equipment and classroom supplies will need to be moved to a temporary location so that students’ education will not be impacted adversely during the renovation

Note: This position can be shared equally with MWIM and other ATE Programs.

5. Resource Implications

Special Resource Requests not included in your operating “B” budget

I am NOT requesting additional resources for my program/unit.

I AM requesting additional resource(s) for my program/unit.

Total number of items being requested: 2 (4 items max.)

✓ **Item Description:**

APT-B position

✓ **Justification:**

Filling the AP-B position is crucial for advancing our action plans and addressing the ongoing challenges we face in coordinating outreach and collaboration with both campus and industry partners. This role will streamline the administration of various responsibilities, such as managing reports, fostering student connections, and facilitating internships. It will also oversee purchasing and procurement, coordinate advisory board meetings, and maintain organized curriculum records for faculty. Additionally, the APT-B can support faculty in maintaining micro-credential badges with industry-to-academic alignments, as the UH System is currently piloting and implementing these in various programs. By enhancing our outreach efforts with the Department of Education and community partners, the APT-B will facilitate industry speaking events that benefit our students. Sharing this position between the MWIM and DIMC Programs will not only bolster the support for these faculty programs but also contribute significantly to the overall well-being of the Kauhale community. Furthermore, the renovation of the Diesel shop from I will need assistance. As the sole faculty member, I am responsible for teaching classes, which prevents me from moving equipment to make space for the contractors. I would greatly appreciate support for the relocation of all shop and classroom items and facilitating the renovations as needed for the length of the renovation project.

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- ✓ **Item Description:**
The Kenworth truck tractor
- ✓ **Justification:**

The need for a Kenworth truck is essential in light of the significant advancements in diesel engine technology, which require students to have access to updated training aids to learn about the various truck systems and component locations. This Kenworth truck will serve as a vital resource throughout the DIMC 120, DIMC 130, DIMC 140, and DIMC 150 courses, providing hands-on experience that enhances the CDL training. Additionally, sharing this resource with EDvance and local community members will facilitate greater access to CDL certification opportunities, supported by grant funds. With a growing shortage of CDL drivers possessing a DIMC degree, our program will become more attractive to prospective students and employers alike, fostering partnerships that can upskill existing employees and create collaborative internship pathways. This initiative also aligns with the micro-credentialing efforts within the UHCCC pathways. Moreover, funding options through Good Jobs Hawai'i and potential Rapid Emergency Funding in collaboration with EDvance highlight the urgency of acquiring a stable truck for training purposes. Overall, securing a Kenworth truck will provide invaluable support for students, enhance employment assistance, and contribute to the broader Kauhale community.

ALLOWED CATEGORIES	Category-Specific Information Needed			
Personnel Resource	Estimated Date Needed AY25-26	FTE; Position Type; Position Title FTE: APTB: Academic Support Specialist	63,000 BU8 Starting Salary	Was an Existing Position Abolished? (Y/N); Position # N
Physical	AY24-25	Kenworth Truck Tractor	\$190,000	