

Program Review

Executive Summary

Heavy Equipment Technology

Majors Reviewed:

- Heavy Construction Equipment Technology:
Caterpillar Emphasis (CH), A. A. S
- Heavy Construction Equipment Technology:
Technician Emphasis (HE), A. A. S
- Heavy Construction Equipment Technology:
Operator Emphasis (HY), A. A. S

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The Heavy Construction Equipment Technology program is distinctive for its varied major pathways that include operating equipment Heavy Construction Equipment Technology: Operator Emphasis (HY), maintaining and repairing vehicles Heavy Construction Equipment Technology: Technician Emphasis (HE) and a manufacturer supported major, Heavy Construction Equipment Technology: Caterpillar Equipment Emphasis (CH). The uniqueness of HY results in a one-year waiting list and tremendous employment opportunities for all graduates.

The Marcellus Shale Industry boom, along with the newly approved transportation bill, continues to produce opportunities for our graduates. Continued job growth is expected at the federal, state, and local levels; therefore, the program requires additional resources to accommodate future increases in enrollment. Facility space and the costs of acquiring equipment, fuel, and rentals are concerns and raise the per-credit cost of instruction. Outreach to other manufacturers and creative approaches to instruction and scheduling need to be pursued.

The students are increasingly in need of remediation, but their overall retention and graduating rate is above the college average. The CH emphasis has higher retention rates, likely due to the active relationship between the students and Caterpillar dealers. Although the wait list for HY is evidence of the strength of the program, it has a potentially negative impact on retention as some students leave while enrolled in remedial and support courses.

Learning outcomes are examined in one third of the courses each year; findings are reflected in the department's three-year plan. Changes stemming from outcomes assessment and previous program review include enhanced faculty training, additional industry-specific electives, and increased visibility within our target market. The curricula will be revised due to an anticipated change from Associated Equipment Distributors (AED), and additional electives are being considered in response to employer requests.

Although one of the more expensive programs at Penn College, Heavy Construction Equipment Technology has been a tremendous asset in Marcellus Shale training, supplying technicians and operators to the oil and gas industry and to community service projects, as well as contributing to the College's positive reputation in the region. Industry employers are satisfied with our graduates, yet industry support for the advisory committees and equipment donations could be greatly improved upon. The future for technicians and operators is promising, and Penn College is well positioned to meet the future demands of the industry.

The following recommendations will ensure the viability and competitiveness of the Heavy Construction Equipment Technology program:

Equipment / Facilities:

- Continue auctioning used, obsolete, and unneeded equipment and reinvest into the program.
- Solicit a new sponsor program, such as John Deere, Komatsu, Volvo, or Case to complement the CAT program.

- Partner with supporting industry to leverage better rental and equipment repair pricing or to allow temporary use at little or no charge for support (possible Komatsu support).
- Purchase other hybrid drive and electromechanical controlled equipment.
- Increased lighting in newest laboratory areas.

Marketing:

- Promote dual degree option of HE and PW with specific marketing material.
- Examine the future of the career fair and its impact.
- Expand articulation with select secondary schools.
- Increase participation in public events such as truck/tractor pulls, outdoor shows, and fairs.

Curricular / Instructional:

- Increase dedicated and direct intervention with deficient students.
- Expand elective offerings into agriculture, with potential assistance from John Deere or New Holland.
- Consider course revisions to enable more specific instruction in smaller credit classes (removing power shift from Hydraulics III as an example).
- Optimize the use of present space and equipment through alternative scheduling formats.
- Explore a Commercial Driver's License (CDL) option, probably through WDCE. CDL is an expectation of most of our employers.
- Increase training and trade show opportunities beyond CAT equipment; possibilities include New Holland, John Deere, Volvo, and Komatsu.
- Seek increased industry representation on the advisory boards.
- Expand the current part-time toolroom attendant position to one full-time position to eliminate the recurring turnover of attendants.