DIESEL TECHNOLOGY SPECIALIZED IN HEAVY EQUIPMENT

Uvalde Campus

Purpose

The purpose of the Diesel Technology Specializing in Heavy Equipment program is to provide students with training in maintaining, troubleshooting, and repairing heavy diesel-powered equipment. Coursework emphasizes diesel engines, hydraulics, electrical, air conditioning, and diesel fuel injection systems. The goal of the program is for graduates to be employable as entry-level technicians in a heavy equipment diesel engine service shop, dealership, or industry.

Admission Requirements

Students are admitted to the Diesel Technology program through regular college admission procedures (see Admission Regulations section).

Students will receive a Level One Certificate and/or an Associate of Applied Science (A.A.S.) degree upon satisfactory completion of the program of study and upon making a formal application for graduation (See Curricula section). The Diesel Technology Specialized in Heavy Equipment Program carries three award options, a Level One Basic Certificate, a Level One Advanced Certificate, and an A.A.S. degree. The Level One Certificates are TSI exempt; however, those not meeting TSI requirements are encouraged to enroll in the appropriate developmental course(s).

Students who wish to pursue the A.A.S. degree must meet all Texas Success Initiative (TSI) requirements.

DIESEL TECHNOLOGY SPECIALIZED IN HEAVY EQUIPMENT - BASIC LEVEL ONE CERTIFICATE

Program of Study

Fall Semester	Credit
EDUC 1300π Learning Framework	
Or COLS 0300 College Success Skills	
DEMR 1305 Basic Electrical Systems	3
DEMR 1329 Preventative Maintenance	3
DEMR 1317 Basic Brake Systems	3
Total	9 Credits

Spring Semester	Credit
DEMR 1406[1] Diesel Engine I	4
DEMR 1421 Power Train I	4
DEMR 1416 Basic Hydraulics	4
Total	12 Credits

Total Hours For Certificate.....21 Credits

Notes: π All students are required to take EDUC 1300 or COLS 0300; however, EDUC 1300/COLS 0300 do not count toward degree requirements

1 Capstone course that consolidates the student's learning experiences.

DIESEL TECHNOLOGY SPECIALIZED IN HEAVY EQUIPMENT - ADVANCED LEVEL ONE CERTIFICATE

Program of Study

Fall Semester	Credit	Spring Semester	Credit
HEMR 1401 Track and Undercarriage	4	DEMR 2348 Failure Analysis	3
DEMR 1435 Automatic Power Shift and Hydrostatic Transmissions	4	DEMR 2432 Electronic Controls	4
DEMR 1423 Diesel HVAC Troubleshooting & Repair	4	DEMR 2335 Advanced Hydraulics	3
		DEMR 2281[1] Co-op Education Diesel	2
Total	12 credits	Total	12 Credits

Total Hours For Certificate.....45 Credits

Notes: 1 Capstone course that consolidates the student's learning experiences

DIESEL TECHNOLOGY SPECIALIZED IN HEAVY EQUIPMENT – ASSOCIATE OF APPLIED SCIENCE

General Education Courses:

Social & Behavioral Sciences 3
Humanities & Fine Arts 3
Natural Science & Math 3
Other 6

Total General Education Courses..... 15
Technical Education Courses..... 45
Total Credit Hours for A.A.S..... 60

Program of Study

First Year

Fall Semester	Credit	Spring Semester	Credit
DEMR 1305 Basic Electrical Systems	3	DEMR 1406 Diesel Engine I	4
DEMR 1329 Preventative Maintenance	3	DEMR Power Train I	4
DEMR 1317 Basic Brake Systems	3	DEMR Basic Hydraulics	4
Total	9 credits	Total	12 credits

Program of Study

Second Year

Fall Semester	Credit	Spring Semester	Credit
HEMR 1401 Track and Undercarriage	4	DEMR 2348 Failure Analysis	3
DEMR 1435 Automatic Power Shift and Hydrostatic Transmissions	4	DEMR 2432 Electronic Controls	4
DEMR 1423 Diesel HVAC Troubleshooting & Repair	4	DEMR 2335 Advanced Hydraulics	3
		DEMR 2281[1] Co-op Education Diesel	2
Total	12 credits	Total	12 Credits

Program of Study

Third Year

Fall Semester	Credit
PSYC 2301 General Psychology	3
ENGL 1301 Composition I	3
MATH 1332 Contemporary Mathematics	3
SPCH 1321 Business & Professional Communication	3
Humanities and Fine Arts	3
Total	15 Credits

Total Credit For AAS is 60 Credit Hours

Notes: 1 Capstone course that consolidates the student's learning experiences.

Tuition and Fees

Standard tuition and fees are assessed to each student as indicated in the finances section. Lab and uniform fees are also assessed (see Course Descriptions). Each student can also expect to purchase the following required textbooks and tools.

1 Tool Set* (approximate cost) $600

* A tool list will be provided by the instructor.

Textbooks (approximate cost).....$225

Proposed AAS Diesel Technology Specialized in Heavy Equipment

Semester 1	
Class Name:	**Credits:**
EDUC 1300 Learning Framework or COLS 0300 College Success Skills	
DEMR 1329 Preventative Maintenance	3
DEMR 1305 Basic Electrical Systems	3
DEMR 1317 Basic Brake Systems	3
Semester Total:	9

Semester 2	
Class Name:	**Credits:**
DEMR 1406 Diesel Engine I	4
DEMR 1421 Power Train I	4
DEMR 1416 Basic Hydraulics	4
Semester Total:	12

Semester 3	
Class Name:	**Credits:**
HEMR 1401 Tracks and Undercarriage	4
DEMR 1435 Automatic Power Shift and Hydrostatic Transmissions I	4
DEMR 1423 Diesel HVAC Troubleshooting & Repair	4
Semester Total:	12

Semester 4	
Class Name:	**Credits:**
DEMR 2348 Failure Analysis	3
DEMR 2432 Electronic Controls	4
DEMR 2281 Co-op Education Diesel	2
DEMR 2335 Advanced Hydraulics	3
Semester Total:	12

Semester 5	
Class Name:	**Credits:**
PSYC 2301 General Psychology	3
ENGL 1301 Composition I	3
MATH 1332 Contemporary Mathematics	3
SPCH 1321 Business & Professional Communication	3
Humanities & Fine Arts	3
Semester Total:	15

Program Total: **60** Credits

Proposed Level 1 Basic Diesel Technology Program- Kubota Academy

TSI Exempt

Semester 1	
Class Name:	**Credits:**
EDUC 1300 Learning Framework or COLS 0300 College Success Skills	
DEMR 1305 Basic Electrical Systems	3
DEMR 1329 Preventative Maintenance	3
DEMR 1317 Basic Brake Systems	3
Semester Total:	9

Semester 2	
Class Name:	**Credits:**
DEMR 1406 Diesel Engine I	4
DEMR 1421 Power Train I	4
DEMR 1416 Basic Hydraulics	4
Semester Total:	12

Program Total: 21 Credits

Kubota Pre-Delivery Inspection & Assembly NC3 Certification
Kubota Preventative Maintenance Inspection NC3 Certification
Kubota Electrical NC3 Certification

ASE Medium/Heavy Truck Brakes Entry-level Certification
ASE Medium/Heavy Truck Electrical Entry-level Certification

Proposed Level 1 Advanced Diesel Technology Program- Kubota Academy

TSI Exempt

Semester 1	
Class Name:	**Credits:**
EDUC 1300 Learning Framework or COLS 0300 College Success Skills	
HEMR 1401 Tracks and Undercarriage	4
DEMR 1435 Automatic Power Shift and Hydrostatic Trans	4
DEMR 1423 Diesel HVAC Troubleshooting & Repair	4
Semester Total:	12

Semester 2	
Class Name:	**Credits:**
DEMR 2348 Failure Analysis	3
DEMR 2432 Electronic Controls	4
DEMR 2335 Advanced Hydraulics	3
DEMR 2180 Co-op Education Diesel	2
Semester Total:	12

Program Total: 24 Credits

Kubota Maintenance Procedures NC3 Certification
Kubota Engines, Hydraulics, Powertrain NC3 Certification
Kubota Brakes, Steering, Suspension NC3 Certification

ASE Diesel Engines Entry-level Certification
ASE Suspension & Steering Entry-level Certification

Southwest Texas Junior College
Curriculum Committee Submission Form

4. Policy Change (Please select one of the options below)

☐New	☐Revision	☐Deletion
Policy Title:	Source:	Page Number:
Why is this policy change needed?		
Attached proposed policy change.		

5. Site Change (please select one of the options below)

☑ New Site	☑ Site Status	☐ Site Deletion
Name of site: Uvalde Campus Diesel Classroom and Lab		Start Date: Fall 2024
List all courses (e.g., BIOL 2401) or describe change to site: Courses listed in degree plan for Diesel Technology Program Specialization in Heavy Equipment.		

_____ Date: _____
Signature of Faculty or Administrator

_____ Date: 11/6/23
Division Chair

_____ Date: 11/6/2023
Dean

_____ Date: 28 Nov 2023
Vice President

Curriculum Committee Action: Recommendation: ☐Yes ☐No

Curriculum Committee Chair: _____ Date: _____

President / Cabinet Rep: _____ Date: _____

President (New Program) _____ Date: _____

Attach copy of Board Minutes showing Approval