

## Diesel Technology

### Course Information

Credits	48
Campus	Washburn Institute of Technology
Address	5724 SW Huntoon
City/State/Zip	Topeka, Kansas 66604
Office Fax	785-273-7080

### Description

Diesel technology is a hands-on, high-tech transportation career that is in demand. Diesel technicians repair, service and maintain diesel powered equipment. Potential employers include trucking companies, large equipment dealers and local governments. Our students benefit from state-of-the-art training labs, thanks to corporate partners such as CASE Construction, The Victor L. Phillips Company and BNSF Railway. Companies are struggling to find high-quality diesel technicians and Washburn Tech is helping fill the void.

### Instructors

Bob Arney	785.228.6426	E-mail: <a href="mailto:robert.arney@washburn.edu">robert.arney@washburn.edu</a>
Zachary Frisbie	785.228.6442	E-mail: <a href="mailto:zachary.frisbie@washburn.edu">zachary.frisbie@washburn.edu</a>
Jay Thowe	785.228.6438	E-mail: <a href="mailto:jay.thowe@washburn.edu">jay.thowe@washburn.edu</a>

### Textbooks

See Program Cost sheet for details. Most texts are on-line and the access code is included in the course fees

### Student Learning Outcomes:

- A. Communicate effectively
- B. Integrate technology
- C. Learn effectively
- D. Demonstrate cooperative teamwork skills
- E. Apply safety in the workplace
- F. Think critically and creatively
- G. Demonstrate responsible work ethics

## Course Listing and Competencies

Following are the courses for the Diesel Technology Program. The “blocks” (DT-1,2,3,4) indicate semesters. The sequence of blocks and courses within the blocks will vary based on the individual students Graduation Plan.

See individual course sheets for course descriptions and competency listings.

<b>DT-3</b>		<b>Credits</b>
DEM231	Diesel Engines I	5
DEM241	Advanced Diesel Engines	5
DEM250	Engine Performance	2
		12

<b>DT-1</b>		
DEM113	Electrical/Electronic Systems	5
DEM123	Hydraulics	5
IND105	OSHA 10 - General Industry Certification	1
DEM111	Shop Skills & Safety Fundamentals	1
		12

<b>DT-4</b>		
DEM268	Auxiliary Power Units/Refrigeration	2
DEM221	Drive Trains	3
DEM248	Drive Trains II	3
DEM230	Brakes Service	2
DEM238	Suspension & Steering Service	2
		12

<b>DT-2 (Prerequisite: DT-1)</b>		
DEM148	Advanced Electrical/Electronic Systems	5
DEM143	Brakes	3
DEM138	Suspension and Steering	3
DEM116	Workplace Skills	1
		12

**Total 48**

Optional-(Electives) to be taken outside of scheduled meeting times of courses listed above. Not eligible for financial aid.		
DEM146	Welding for Diesel (optional)	4
CHC195	Class A CDL (optional)	1

## Guidelines for Success

### Assessment Plan

Assessment is an integral part of the educational process at Washburn Tech and accurate feedback is an important tool in continuously improving the institution's technical programs. Students can expect to participate in assessment activities prior to entry into programs, within specific courses and following program completion for specific fields of study.

### Grading Rationale

Student progress is evaluated by means that include, but not limited to:

#### **Lab Activities..... 40%**

A composite evaluation of hands-on tasks performed in the lab such as:

1. Tool usage
2. Use of reference materials
3. Adherence to safety (zero tolerance)
4. Work completed to industry standards
5. Instructor's Evaluation

#### **Professional Behavior ..... 30%**

A daily grade based on 10 points per day. No points are earned if absent.

Areas evaluated are:

1. Participation: Arrived at class/lab on time and equipped to learn by having all required materials such as safety glasses, writing utensils, books, etc. Actively contributing to class discussions, timely completion of assignments, and contributing to a positive learning environment
2. Attitude: Willingness to work with instructors and other students, respect of other points of view and learning styles, ready and willing to learn
3. Professionalism: Required Washburn Tech uniform shirt is clean and tucked in. Adherence to dress code and to all other program and school policies regarding tools, vehicles, behavior, etc.
4. Safety: Violation of safety policy may result in loss of ALL daily points. Safety glasses with clear lenses and side shields worn in required areas, steel toed boots or shoes worn, no horseplay.
5. Sanitation: Work area and any other assigned area kept neat and clean.

#### **Classroom Activities ..... 10%**

A composite grade based on the quality of completed classroom assignments such as:

1. Written assignments
2. Homework
3. Oral presentations

#### **Quizzes and Tests ..... 10%**

1. Quizzes (daily or weekly)
2. End of topic written or performance exams.
3. Mid-Term exams

#### **Final Exams ..... 10%**

A composite grade based on written, oral and performance exams such as:

1. End of course written or performance exams. This may include grades from certification testing.
2. Hands-on performance exams. At instructor's discretion, may be recorded in "Lab Activities."

## Grading Scale

- 90-100% A
- 80-89% B
- 70-79% C
- 60-69% D
- 59% or less F

## Attendance

Attendance is a key part of success in the program and in the workplace. Students are to arrive for class on time and be prepared to learn. Absences or tardiness will negatively impact grades. Missed time cannot be made up. Many assignments and labs cannot be “made-up” if missed. The options to make-up missed work or to accept late work is at the discretion of the instructor.

## Dress Code

- Students will wear one of the following:
  - Washburn Tech Diesel Technology shirt (two provided 1<sup>st</sup> semester)
  - Snap-on logo collared shirt or collared polo (available from Snap-on website)
  - If in HDCT, CASE collared shirt or collared polo (available from CASE)
  - If in HDCT and while in internship, collared company shirt.
- Shirts must be clean and tucked in.
- Shirts to be worn as the top layer while in classrooms.
- Jackets or hoodies allowed in the shop. No inappropriate logos.
- Students will wear jeans or a similar type of pants in good, clean condition. (no shorts or loose/baggy/torn pants)
- Dresses are not allowed for female students.
- Steel toe capped shoes or work boots will be worn in the shop area.
- No loose fitting or dangly jewelry is allowed.
- Metal banded wristwatches and rings are not recommended in the lab

## TOOL POLICY

Students are not required or allowed to have personal tools at the school. Washburn Tech provides all necessary tools to meet the students’ needs. A suggested tool list appropriate for an entry level Diesel Technician will be provided to our students. Several vendors offer deep discounts on tools to the Washburn Tech students. We strongly encourage students to take advantage of this opportunity to ensure they will have the tools to seek immediate employment upon completion of the program.

## PROGRAM POLICIES

- Students are to arrive for class on time and be prepared to learn. Except in cases of emergencies, students are expected to attend school unless physically unable. Absences or tardiness will negatively impact grades.
- Class will be dismissed in the classroom by the instructor.

- Students are to inform instructors any time they are on medications (prescription or over-the-counter). This is necessary for the instructor to modify their activities in the shop to ensure safe operation of equipment and machinery.
- Students will follow all safety requirements and instructions.
- No cell phones or pagers in shop/classroom without instructor prior approval.
- Laser lights are prohibited in shop/classroom.
- Food and drink are not allowed in the shop/classroom without instructor permission.
- No music devices in shop/classroom including usage of vehicle radios/CD players, without instructor permission.
- Students will take an active role in group/team projects.
- Appropriate and professional behavior is expected at all times. No horseplay, profanity, running, etc.
- Harassment of any kind – sexual, racial, or verbal, will not be tolerated. (see student handbook)
- Students will clean up their own work areas daily and participate in general shop duties.
- Students will work in their designated shop area unless they have received prior permission of the instructor.
- Students are not allowed in the instructor's office unless an instructor is present and permission is given.
- Students are not permitted to be in their personal vehicle during class or breaks without instructor permission.
- The options to make-up missed work or to accept late work is at the discretion of the instructor.
- Students will not be able to test drive vehicles without a valid Driver's License.

### Disability

The Americans with Disabilities Act (ADA) Office is responsible for assisting in arranging accommodations and for identifying resources at Washburn Institute of Technology for persons with disabilities. Qualified students with disabilities MUST self-identify by completing an application. In addition students must provide appropriate medical documentation to the ADA coordinator to be eligible for accommodations. New requests for accommodations should be submitted at least two months or more prior to the date the accommodations are needed. However, please contact the ADA office as soon as a need may arise. Depending on the accommodation request, four to eight weeks lead time may be needed for timely and effective provision of accommodations.

The ADA Office coordinates and assists in arranging accommodations it deems appropriate for eligible students on a case-by-case basis. If you are a student with a disability that may substantially limit your ability to participate in any of our classes and you believe that you will need accommodations, it is your responsibility to contact:

**ADA Coordinator:**      **Phone: 785-228-6356**      **Email: [gloria.christian@washburn.edu](mailto:gloria.christian@washburn.edu)**

It is the policy of Washburn Institute of Technology to assure equal employment and educational opportunity to qualified individuals without regard to race, color, sex, age, ancestry, marital or parental status, disability, religion, national origin, or sexual orientation/gender identity. Contact Pam Foster, Morgan Hall, Room Washburn University (785-670-1509), and [pam.fosterel@washburn.edu](mailto:pam.fosterel@washburn.edu).

