

# Diesel Technology Programs

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# Table of Contents

Mission Statement	3
College Facts	4
Curriculum	5
Student Admissions Requirements	10
Common Questions	11
Student Tool Requirements	12
Scholarship Information	14
Campus Maps Information	15
Housing	16
Are You Ready	18

## Mission Statement

The Vincennes University Diesel Truck Program's mission is to equip students with the knowledge and skills for employment as a service technician in a heavy truck or heavy machinery dealership. Intensive course work, laboratory experience, use of equipment-specific electronic media and technology, and on-the-job training, along with a broad understanding of principles and theories, cultivate critical diagnostic and repair skills. Upon graduation, students will be prepared to enter the workforce as an apprentice technician within the heavy-duty diesel industry (Class 8 Trucks, Construction, Marine, Power Generation, Agriculture, and Mining).

## Program Learning Outcomes

Students who complete course work in the Diesel Truck program will be able to:

- Use electronic media for retrieval of technical repair information.
- Evaluate diagnostic procedures.
- Perform repair procedures correctly in an efficient time frame.
- Employ communication and language skills as it relates to Diesel Technology.
- Understand the theory of:
  - Engine fundamentals and repair
  - Electrical/electronic principles
  - Fuel system fundamentals and repair
  - Hydraulic systems fundamentals and repair
  - HVAC fundamentals and repair
  - Powertrains fundamentals and repair



## College Facts

**Founded:** VU is Indiana's first college. William Henry Harrison, the ninth U.S. President, founded VU in 1801 while serving as governor of the Indiana Territory. VU was incorporated as Vincennes University on November 29, 1806.

**Campuses:** VU is state-supported with campuses in Vincennes and Jasper and additional sites such as Indianapolis, Lebanon, and Gibson County. A leader in developing Early Colleges statewide, VU also offers instruction at military sites throughout the nation. The Vincennes Campus covers 200+ acres and includes more than 30 major buildings. The Welsh Administration Building is the oldest building on campus.

**Residential life:** The Vincennes Campus is the only residential campus and features 7 residence halls housing nearly 1,700 students.

**International students:** At our Vincennes Campus there have been students representing countries such as Australia, Bahrain, Brazil, China (including Hong Kong), Congo (Kinshasa), Dominican Republic, Ecuador, France, Jamaica, Japan, Latvia, Lithuania, Nigeria, Romania, Russia, Saudi Arabia, Saudi Arabia (Jordan), Saudi Arabia (Lebanon), Serbia, South Africa, Spain, Vietnam, Zimbabwe.

**Mission Statement:** Vincennes University, Indiana's first college, is the State's premier transfer institution and leader in innovative career programming. The VU community ensures educational access, delivers proven associate and baccalaureate programs, and offers cultural opportunities and community services in a diverse, student-centered, collegiate environment.

**Vision Statement:** Vincennes University is a premier learning institution, widely recognized for leadership in innovation and delivery of successful educational experiences. A broad range of program offerings and a commitment to superior service ensure the University's role as an important link in Indiana's economic and

cultural vitality. VU is a diverse community whose members all share responsibility for supporting the University's mission and are respected for their contributions.

## Curriculum

Certificate Program Diesel courses are noted with a \*. Plus 6 credit hours of UCC Humanity, Mathematics, Science, Social Science, Writing, or Fitness/Wellness Electives.

### Semester 1

- [DESL 110 - Diesel Electrical](#) 3 hrs
- [DESL 110L - Diesel Electrical Laboratory](#) 1 hr
- [DESL 140 - Diesel Hydraulic Systems](#) 2 hrs
- [DESL 140L - Diesel Hydraulic Systems Laboratory](#) 2 hrs
- [ENGL 101 - English Composition I](#) 3 hrs
- 100-level or higher Mathematics (MATH or MATT) Elective 3 hrs

#### **\*DESL 110 - Diesel Electrical 3 hrs -or- AUTO 110 - Transportation Electrical 3 hrs**

This course addresses the fundamental theories of electricity and electronics as applied to diesel and heavy equipment. Diagnosis and repair of basic battery, starting, charging, lighting, accessories, and wiring systems will be covered. The utilization of digital meters, wiring diagrams, and other diagnostic tools will be stressed. 3 lecture hours.

#### **\*DESL 110L - Diesel Electrical Laboratory 1 hr -or- AUTO 110L - Transportation Electrical Laboratory 1 hr**

This course is a hands-on course that introduces the student to diesel and heavy equipment electrical theory, batteries, charging systems, starting systems, wiring repairs, lighting systems, and accessories. 3 laboratory hours.

#### **\*DESL 140 - Diesel Hydraulic Systems 2 hrs**

The study of hydrostatic and hydrodynamic system theory of operation, including gear, piston pumps spool, poppet, and electro-hydraulic valves problem diagnosis and repair procedures. 2 lecture hours.

#### **\*DESL 140L - Diesel Hydraulic Systems Laboratory 2 hrs**

This is a hands-on course that introduces the student to the repair and troubleshooting of hydrostatic and hydrodynamic systems. The course will include the repair of gear and piston-type pumps, spool, poppet, and electro-hydraulic valves. 6 laboratory hours.

#### **ENGL 101 - English Composition I 3 hrs**

English Composition I is a college-level course in critical reading and writing designed to help students develop their ability to think critically, organize their thoughts, and express ideas clearly and effectively. The course will focus on the various modes of expository writing, such as process, description, narration, comparison, cause/effect, and analysis, and give significant focus to argumentation. Students will be introduced to documentation. Numerous in-class assignments are required in addition to extended essays written outside of class. Required of all students. *This course is a transferIN course.* 3 class hours.

Prerequisite(s): A grade of C or better in [ENGL 010](#), or a grade of C or better or concurrent enrollment in [ENGL 079](#), or SAT Writing score of 440 or greater and SAT Reading score of 420 or greater, or appropriate placement test scores.

**100-level or higher Mathematics (MATH or MATT) Elective 3 hrs**

## **Semester II**

- [COMM 143 - Speech](#) **3 hrs**
- [DESL 130 - Diesel Engine Systems](#) **3 hrs**
- [DESL 130L - Diesel Engine Systems Laboratory](#) **3 hrs**
- [DESL 160 - Diesel Preventative Maintenance](#) **2 hrs**
- [DESL 160L - Diesel Preventative Maintenance Laboratory](#) **1 hr**
- [SOCL 141 - Applied Sociology](#) **3 hrs**

### **COMM 143 - Speech 3 hrs**

Introduces fundamental concepts and skills for effective public speaking including audience analysis, outlining, research, delivery, critical listening and evaluation, and the use of visual aids/technology. *This course is a transferIN course.* 3 class hours.

Prerequisite(s): Students must qualify for [ENGL 010](#) or [ENGL 079](#).

### **\*DESL 130 - Diesel Engine Systems 3 hrs**

Instruction presents engine operating principles and theories as well as Diesel Fuel Systems and hands-on training related to modern diesel engines. Students will learn inspection, troubleshooting, overhaul, and engine replacement procedures. 3 lecture hours.

### **\*DESL 130L - Diesel Engine Systems Laboratory 3 hrs**

This is a hands-on course that introduces the student to the repair of modern diesel engines. The course will include inspection, troubleshooting, overhaul, and engine replacement procedures. 9 laboratory hours.

### **\*DESL 160 - Diesel Preventative Maintenance 2 hrs**

Course coverage includes inspection of cab and body, tires and wheels, engine compartment, electrical/electronics and cab, undercarriage components. These tasks will be done to DOT specifications. Pre-trip inspections are also covered. 2 lecture hours.

### **\*DESL 160L - Diesel Preventative Maintenance Laboratory 1 hr**

This is a hands-on course that introduces the student to the inspection of a vehicle's cab, body, tires, wheels, engine compartment, electrical/electronic systems, and undercarriage components per DOT specifications. Pre-trip inspections will also be performed. 3 laboratory hours.

### **SOCL 141 - Applied Sociology 3 hrs**

Applied Sociology will discuss the practical application of sociological principles and theories and their relationship to life situations. The study of behavior, values, socialization, and effective methods of interacting with other people and dealing with social situations will be the main focus. The study will include the areas of workplace and social situations as part of the focus on various principles to develop human relation skills that will be useful in a diverse society. 3 class hours.

## **Semester III**

- [CHMT 100 - Fuels, Lubricants, and Coolants](#) **4 hrs**
- [DESL 220 - Diesel Chassis Systems](#) **3 hrs**
- [DESL 220L - Diesel Chassis Systems Laboratory](#) **3 hrs**
- [DESL 230 - Diesel HVAC](#) **2 hrs**
- [DESL 230L - Diesel HVAC Laboratory](#) **1 hr**
- [ENGL 108 - Technical Writing](#) **3 hrs**

### **CHMT 100 - Fuels, Lubricants, and Coolants 4 hrs**

Source, refining, and design of petroleum products; artificial or man-made oils, lubricants, and coolants. 3 lecture hours, 2 laboratory hours.

### **\*DESL 220 - Diesel Chassis Systems 3 hrs**

This course addresses the diagnosis, repair, and various services related to heavy-duty wheel, brake, steering, alignment, and suspension systems. 3 lecture hours.

### **\*DESL 220L - Diesel Chassis Systems Laboratory 3 hrs**

This is a hands-on course that introduces the student to the repair of heavy-duty wheel, brake, steering, and suspension systems. Wheel alignment techniques will also be covered. 9 laboratory hours.

### **\*DESL 230 - Diesel HVAC 2 hrs**

This course will address the theory, diagnosis, and repair of modern heating, ventilation, and air-conditioning systems in diesel and heavy equipment. Environmental concerns related to service, recycling, and recovery of materials will be stressed. Laboratory activities will present “major specific” topics. 2 lecture hours.

### **\*DESL 230L - Diesel HVAC Laboratory 1 hr**

This course involves hands-on activities that introduce the student to the repair of heating, ventilation, and air conditioning systems in diesel and heavy equipment. 3 laboratory hours.

### **ENGL 108 - Technical Writing 3 hrs**

A course designed to provide students of technology with the communication skills that enable them to compose effective, precise, concise, technical reports. *This course is a transferIN course.* 3 class hours.

## **Semester IV**

- [DESL 215 - Diesel Drive Trains 3 hrs](#)
- [DESL 215L - Diesel Drive Trains Laboratory 2 hrs](#)
- [DESL 240 - Diesel Electronic Systems 3 hrs \(WR/S\)](#)
- [DESL 240L - Diesel Electronic Systems Laboratory 2 hrs](#)
- [ECON 208 - Personal Financial Management 3 hrs](#)
- [HLTH 211 - First Aid 2 hrs](#)

### **DESL 215 - Diesel Drive Trains 3 hrs**

Instruction presents theory and work activities relating to the transfer of power from the engine to the drive wheels. Troubleshooting, repair, replacement, adjustment, and preventative maintenance

procedures will be presented for the service of clutches, driveshafts, differentials, drive axles, standard and automatic transmissions. 3 lecture hours.

### DESL 215L - Diesel Drive Trains Laboratory 2 hrs

This is a hands-on course that introduces the student to the repair, inspection, adjustment, and replacement of clutches, driveshafts, differential assemblies, and transmissions. 6 laboratory hours.

### DESL 240 - Diesel Electronic Systems 3 hrs (WR/S)

A continuation of [AUTO 110](#) or [DESL 110](#) which addresses the diagnosis and repair of various electrical and electronic systems commonly found on vehicles today. Electrical/electronic troubleshooting will be stressed. 3 lecture hours.

Writing Reading and Speaking Intensive Course

### DESL 240L - Diesel Electronic Systems Laboratory 2 hrs

This is a hands-on course that introduces the student to the diagnosis and repair of various electrical and electronic systems commonly found on modern vehicles. Electrical/Electronic troubleshooting will be stressed. 6 laboratory hours.

### ECON 208 - Personal Financial Management 3 hrs

A study of the financial concerns of individuals and families. Included are family budgeting, insurance decisions, estate planning, installment buying, investment planning, and tax problems. *This course is a transferIN course.* 3 lecture hours.

Prerequisite(s): Students must qualify for [ENGL 010](#) or [ENGL 079](#), or higher.

### HLTH 211 - First Aid 2 hrs

This course is designed to provide an introduction to basic first aid and emergency response procedures. National standards for First Aid and CPR will be covered and represents the minimal course guidelines. Students who qualify will receive certifications in CPR, AED, and First Aid Basics by one of the nationally accredited certifying agencies. *This course is a transferIN course.* 2 class hours.



# Student Admission Requirements

## Admission for Degree-Seeking Students

Admission as a student to Vincennes University leading to a degree or technical certificate requires either: a high school diploma (request transcript using Parchment.com), or an official General Educational Development (GED) or

Test Assessing Secondary Completion (TASC) transcript, or 24 hours of postsecondary credit from a regionally-accredited institution.

If you're interested in VU acquiring your high school transcripts on your behalf, please print this form and submit it to the Admissions Office.

## Registration Eligibility

Applicants with a high school diploma that was not earned through a Graduation Qualifying Exam (GQE) must demonstrate their college readiness before being allowed to register for classes. College readiness can be proven by presenting postsecondary credit for college-level English or math from a regionally-accredited institution or by obtaining a minimum score as designated by the U.S. Department of Education on one of the three subtests of the Accuplacer placement exam, provided free of charge by VU. Applicants may instead submit achievement of the minimum scores on any of the other tests approved by the U.S. Dept. of Education to document an applicant's college readiness (view list of tests and required minimum scores).

Applicants who are not eligible for registration may appeal to the Director of Admissions to have their application reviewed for provisional acceptance.

Vincennes University maintains an open-door admissions policy but reserves the right to deny admission and/or registration based on the individual's ability to benefit from available educational services. It is strongly recommended that students meet the Indiana Core 40 curriculum requirements, but it is not required for admission.

Applications should be completed online or paper copy and mailed on or before June 1 for fall admission.

Questions should be directed to Vincennes University

Office of Admissions

1002 North First Street

Vincennes, IN 47591

Office: 812.888.4313

Toll-Free: 800.742.9198

Fax: 812.888.5707

Email: [vuadmit@vinu.edu](mailto:vuadmit@vinu.edu)

## **Common Questions**

### **Why is Hands-On Experience Important?**

Classroom knowledge is best supported with real hands-on experience. The U.S. Bureau of Labor Statistics reports that career opportunities for those with formal training in this industry are "excellent" and that those without such training will face competition.

### **How much hands-On experience will the student have?**

As much as 75% of a course.

### **Do students need their own tools?**

Tools will be furnished by VU during on-campus classes. Tools are required for each student while at the sponsoring dealer during on-the-job training, tools are available at discounted rates to VU students.

### **Are Residence Halls on campus?**

Yes, there are seven

### **Do students need their own transportation?**

Yes, The Diesel Technology center is located about four miles north of the main campus at 4259 N. Purdue Road, Vincennes, IN

### **Are there safety and dress regulations?**

Defiantly, we follow safety regulations and policies very closely.

Safety is a topic in every class



## STUDENT TOOL REQUIREMENTS

Tool storage should be large enough to allow the separation of tools to allow the student to work efficiently without spending unnecessary time locating proper tools. All tools should be marked with a personal identification mark. Extra tools may be required if the need arises.

### INSURANCE COVERAGE OF TOOLS AND OTHER PERSONAL ITEMS

ARE THE RESPONSIBILITY OF THE STUDENTS

Tool Chest	10mm - 19mm Standard depth
1/4" Drive socket set	10mm - 19mm Deep Extensions, short, medium, long
3/16" - 1/2" Standard depth	Ratchet handle
3/13" - 1/2" Deep	Universal joint
4mm - 13mm Standard depth	3/8" - 3/4" Flexible socket
4mm - 13mm Deep Extensions, short, medium, long	Torque wrench 0 - 250 IN - LB
Ratchet handle Universal joint	1/2" Socket set
3/8" Drive socket set	Allen wrenches
3/8" - 3/4" Standard depth	.050" - 3/8" Allen wrench 2mm - 12mm metric
3/8" - 3/4" Deep	T - 15 - T 55 Torx wrench set

Pliers

Adjustable joint

1 - 10" Locking

Needle nose

Side cutters

Slip-joint

Snap-ring flat 1 3/4" Min. opening

Small internal/external snap-ring pliers

Large internal/external snap-ring pliers

Screwdrivers

Blade type

1"

6"

9"

12"

1/2" - 1 1/8" Standard depth

1/2" - 1 1/8" Deep

13mm - 32mm Standard DEPTH

13MM - 32MM Deep Extensions, short, medium, long

Ratchet handle

Universal joint

Breaker bar

Torque wrench 0 - 250 FT LB

Combination wrenches

3/8" - 1 1/4" Standard

6mm - 26mm metric

Off-set

Phillips

1" # 2

6" # 1, # 2

12" # 3

1 - 16 OZ Ball Peen hammer

1 - 2 1/2 # Dead blow hammer

3/16 - 3/8 Pin punches

5" Center punch

3/16 - 3/8" Starter punches

Brass punch

.005 - .050" Feeler gauges straight and angle

.005mm-.070mm Feeler gauge straight and angle

Rolling head bar

Hearing protection

15" aligning bar Cotter key extractor

Gasket scraper 1" wide Wire brush

Wire crimper - stripper

Measuring tape - 12 foot

Safety glasses Magnetic pickup tool (telescoping)

Work gloves

Flashlight

**The following must be of high quality**

Truck style tire gauge Dial caliper 0 - 6"

Truck air chuck Micrometer 0 - 1"

O-ring pick set

Dial indicator

10" Adjustable wrench

Snap gauges

Fluke Digital Multimeter

Small-bore gauge



## Scholarship Application

The VU Foundation awarded a record \$1,465,903 scholarship dollars of VU Foundation and University funds for the 2015-2016 school year to incoming and returning VU students. These included awards to students from 8 states across the country and 3 international awards. Currently, the VU Foundation manages over 525 scholarship and department funds, with 247 new funds created in just the last 9 years.

The VU Foundation and Alumni staff operate from the Louie O. Dayson Foundation and Alumni Center at the corner of Third Street and College Avenue on the Vincennes University Campus.

Office hours are 8:00a.m. - 4:30p.m., Monday through Friday.

Our contact numbers are:

Foundation - 812.888.4510/877.300.6992

Alumni - 812.888.4354/800.945.ALUM (2586)

Fax - 812.888.5942

[vufdn@vinu.edu](mailto:vufdn@vinu.edu)

[vuscholarships@vinu.edu](mailto:vuscholarships@vinu.edu)

Visit this site for a complete scholarship application.



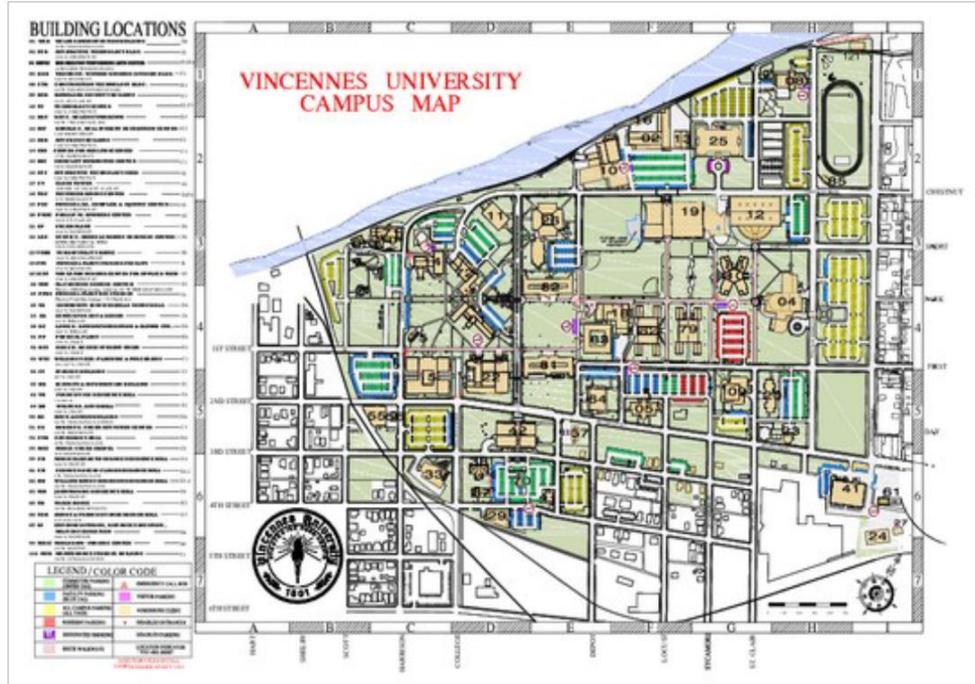
## Campus Map

**Vincennes University's Diesel Technology Center  
and  
The AG Center is located at:  
4259 North Purdue Road  
Vincennes, Indiana 47591**



A map of the Vincennes University main campus may be found at the following web address

<https://www.vinu.edu/vincennes-campus>



## Housing

### Residence Halls

## Clark Hall



Co-Ed housing, private and handicap accessible suites and 2 bedroom-4 person suites. Suites include a small living area.

## Ebner Hall



VU's first living/learning community. Male students in the Technology field and female students in STEM majors can live in the building where a majority of their classes are held.

## Godare Hall



Single sex or coed housing depending upon current enrollment needs. Rooms for 2 persons, computer facilities, laundry facilities, kitchenette, and areas for study.

## Morris Hall



Containing two-person rooms, it is used for either coeducational or single sex housing depending on enrollment. A computer lab and recreation room are available for student use.

## Vanderburgh Hall



Only all-female hall on the Vincennes Campus. Each suite is comprised of two rooms joined by a master bath. Study and television lounges, a computer room, a kitchenette, and laundry facilities.

## Vigo Hall



Used for either single sex or coeducational housing, depending on the current enrollment needs. The hall contains rooms for two, study lounges, a computer lab, kitchen, laundry, and areas for study.

## VU Apartments

## Third Street Apartments



Experience off campus living with your friends in town-homes and duplexes managed by Vincennes University. Options range from 4 bedrooms up to 7.

## French Quarter Apartments



The French Quarter is a one of a kind property featuring units with 3 private bedrooms/bathrooms with walk-in closets.



## Are You Ready?

- Complete and submit an application to VU
- Receive acceptance letter
- Wait to receive a letter regarding campus orientation, placement testing, and class registration
- Arrive on campus on the assigned date as listed in the above letter. This will be a full day – be well-rested and alert for placement testing, and arrive on time.
- While on campus for testing on assigned date, meet with your advisor to register for classes. Write down any questions ahead of time that you may have in order to discuss them with
- Your advisor at this time.
- While on campus on the assigned date for placement testing and registration, many tool suppliers will be available for you to place your tool orders at a highly discounted cost. Suppliers will only be available on this date.

