Course Information Form (CIF)

Course Code: AFM 118

Course Title: Noise, Vibration, and Harshness Principles and Diagnosis

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 47.0604
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 1-2-2
Credit Hour Distribution:

Lecture: 1	Lab: 2	Clinical: 0	**Total: 2**

General Course Information

Catalog Description

Diagnosis of noise, vibration, and harshness (NVH) issues in vehicle systems using NVH diagnostic tools and equipment. Students who successfully complete this course may receive credit for Noise, Vibration, and Harshness Principles and Diagnosis from Ford Motor Company.

General Course Objectives

Upon completion of the course students will be able to pinpoint an NVH concern to a vehicle system, perform NVH diagnostic tests and measures, and use NVH diagnostic tools and equipment.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 060

Prerequisites

None

Methods of Evaluation

The minimum number of evaluation methods include: 3 quizzes, 10 lab exercises, 4 web courses, 1 exam, and 1 lab practical exam.

Instructional Materials and Additional Supplies

NVH Principles and Diagnosis, by Ford Motor Company, FCS-12954-REF

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
NVH Fundamentals	1. Demonstrate an understanding of frequency, amplitude, resonance, pitch, vibration transfer path, order of vibration, transfer path, and correct terminology.	5	0	0
NVH Diagnostic Tools and Equipment	1. Demonstrate an understanding of using the correct tools properly, including a sirometer, electronic vibration analyzer, reed tachometer, chassis ears, EngineEAR, ultraphonic detector, and vibrate software.	5	20	0
Diagnostic Process Calculating Frequencies	1. Demonstrate an understanding of using the proper diagnostic process to determine faults.	5	10	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
15	30	0