



ACCREDITATION EVIDENCE

Title: Automotive Program Review

Evidence Type: Corroborating

Date: 2021-2022

WAN: 22-0456

Classification: Resource

PII: No

Redacted: No



Response CERTIFICATION

Name of Institution: Western Wyoming Community College

Date of Submission: 2021-2022

Part 1. SIGNATURES ATTESTING TO RESPONSE

By signing below, we attest to the following:

1. That Western Wyoming Community College has conducted an honest assessment of Response and has provided complete and accurate disclosure of timely information regarding Response with the Core Requirements, Comprehensive Standards, and Federal Requirements of the Commission on Colleges.
2. That Western Wyoming Community College has attached a complete and accurate listing of all programs offered by the institution, the locations where they are offered, and the means by which they are offered as indicated on the updated "Institutional Summary Form Prepared for Commission Reviews," and that the comprehensive assessment of Response reported on the Response Certification includes the review of all such programs.
3. That Western Wyoming Community College has provided a complete and accurate listing of all substantive changes that have been reported and approved by the Commission since the institution's last reaffirmation as well as the date of Commission approval.

Accreditation Liaison

Name of Accreditation Liaison:

Signature: _____

Date:

Chief Executive Officer

Name of Chief Executive Officer:

Signature: _____

Date:

Automotive Academic Program Review

Name of Institution: Western Wyoming Community College

Year: 2021-2022

1 Program Purpose

1 Program Activity

Describe specific education goals, objectives, and activities of the program. Provide a clear and organized description of three specific education goals, objectives, and activities of the program.

Response

One education goal is for students to identify each part, its purpose and how to properly diagnose and repair, in a safe and efficient manner, that benefits them and the customer.

One objective that we pursue here, is getting students ready to enter the workforce with skills that have been taught here at WWCC by using time management skills and thinking thoroughly before entering each task.

One activity that we encourage is listening to others ideas and train of thoughts. Its always key to get as much information and see all sides of a problem before making a judgement call on the next path to take.

2 General Education and Other Disciplines

Explain how the program serves the general education program. Provide a clear and organized explanation of how the program serves the general education program.

Response

Our trade is often looked at as being a simple skilled labor position, when in reality the skills involved incorporate technical writing, basic math, geometry and trigonometry. Along with learned time management, knowledge and use of these skills benefit all aspects of the general education program. The General education program also serves all of the automotive degrees, ASE certifications and certificates in turn.

Automotive Technology, Associate of Applied Science

Degree Requirements :

Freshman Year - Fall Semester

Auto 1765 Automotive Electrical Systems 1

Auto 1766 Automotive Electrical Systems 2

Auto 1770 Automotive Electronics

Engl 1010 English Composition 1

Cmap 1200 Computer Information Systems

Hmdv 1005 1st Year Success

Total Credit Hours: 16

Freshman Year - Spring Semester

Auto 1700 Engine Fundamentals

Auto 1760 Heating And Air Conditioning

Engl 2005 Technical Writing

Phys 1050 Concepts Of Physics

Tech 1600 Industrial Safety

Total Credit Hours: 19

Freshman Year - Spring Semester Notes: In addition to ENGL 1010, students may be required to also take ENGL 1011 (2 credits) due to placement, adding 2 additional credits to their graduation total.

Sophomore Year - Fall Semester

Auto 1730 Automatic Transmissions

Auto 1740 Brake Systems

Auto 2540 Advanced Brakes And Suspension Systems

Auto 2545 Automotive Alignment And Steering Suspensions

Weld 2630 Welding For The Arts 1

Total Credit Hours: 18

Sophomore - Spring Semester

Auto 1690 Manual Power Transmission Fundamentals

Auto 2510 Engine Performance 1

Auto 2520 Engine Performance 2

Auto 2590 Engine Performance 3

US & WYOMING CONSTITUTION

Hmdv Assessment Requirement

Total Credit Hours: 18

Sophomore Year - Spring Semester Notes: US & Wyoming Constitution can be fulfilled by US to 1865 (HIST 1211), US From 1865 (HIST 1221), Wyoming History (HIST 1251) and American & Wyoming Government (POLS 1000).

3 Market Demand

Document market demand and/or state/industry need for careers stemming from the program. Provide and document two sources showing the market and/or state/industry demand for graduates of this program.

Response

According to the U.S. Bureau of Labor Statistics (BLS), automotive service technicians and mechanics held an estimated 756,600 jobs in 2019 (www.bls.gov).

Automotive Mechanics and Technicians play an extremely important role in the world and it's relation to everything. Since the world runs on wheels, it is incredibly important to have individuals who are not only experienced, but knowledgeable in this field, to help maintain and repair as problems arise. Cars are not what they used to be. Manufacturers have tried to eliminate the "back yard mechanic" and forcing consumers to go to the dealer for work on their vehicles. This is due to numerous reasons, such as safety related issues (brakes, airbags, sensors) or computer related issues, that can only be done by a qualified technician, or even special tools, to prevent tampering or having unqualified individuals in areas of the vehicle that they wouldn't want someone in.

The expected growth each year for Technician openings is about 69,000 according to BLS. This number reflects most of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire. While the demand for technicians each year is great, our country is currently experiencing an automotive technician shortage.

Depending on sources, automotive technicians can earn \$21.18 per hour (\$44,050 yearly) or more or less, depending on experience, flat rate hours, or certifications that they have acquired. There is places that will pay over \$30 per hour for well, experienced, seasoned automotive technicians.

-[What is the Job Outlook for an Automotive Technician Career? \(learn.org\)](https://www.learn.org/what-is-the-job-outlook-for-an-automotive-technician-career/)

-[Skilled auto technicians are in high demand \(cnbc.com\)](https://www.cnbc.com/2022/03/02/skilled-auto-technicians-are-in-high-demand.html)

-[Automotive Service Technicians and Mechanics : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics \(bls.gov\)](https://www.bls.gov/occupational-outlook-handbook/2019/automotive-service-technicians-and-mechanics)

-[Automotive Technician Annual Salary \(\\$47,254 Avg | Mar 2022\) - ZipRecruiter](https://www.ziprecruiter.com/Salary/Automotive-Technician)

2 Curriculum

1 Program Parallels

Describe how program content parallels current thinking/trends in the field/trade. Please provide two sources of documentation showing how the program content parallels current thinking/trends in the field/trade. Example: Journal articles, professional publications, national trend data.

Response

Automotive has gotten quite advanced over the last 30 years and is only going to continue to get more and more advanced, especially with the introduction of electric vehicles.

Automotive technology is not for the faint of heart, it requires extensive reading to understand how a system works, training in that new system, careful thought process on which direction to go when diagnosing an issue and how to properly diagnose a system.

An Automotive Technician is largely responsible for diagnosing and repairing vehicle engine systems. Automotive Technicians may have the following duties and responsibilities:

- Repair brake and steering systems. - **Auto 1740/Auto 2540/ Auto 2545 where students learn and understand brake system, ABS and related systems and steering/suspension components.**
- Diagnose and repair electrical and electronic systems. - **Auto 1765/ Auto 1766/ Auto 1770 are the classes the students take to understand electrical, components, sensors, scan tool usage, and learning to interpret data given to them. They also learn to read wiring diagrams and repairs wiring on vehicles and learn how to use a DVOM.**
- Replace or repair transmissions. - **Auto 1730 and Auto 1690 are all about automatic and manual transmissions, which we also cover differentials and transfer case noise, drivability issues, repair or rebuild.**
- Repair cooling components and systems including air conditioners and engine cooling. - **Auto 1760 Students learn about engine heating and air conditioning in this class. They will learn about diagnosing concerns, properly repairing and following local, state and government protocols when it comes to the removal and disposal of engine coolant and refrigerant.**
- Perform emissions inspections, safety checks and similar state-regulated vehicle examinations. - **Auto 2510/ Auto 2520/ Auto 2590 Students will learn about factors that affect engine performance which in turn affect emissions and emission testing. Students will demonstrate how to check and repair various emission components**
- Maintain a clean, safe working environment.- **All students that come through my program will demonstrate how to keep a shop area clean and orderly, this**

includes, cleaning floors, putting away tools properly, shop hoses, oil spills, creepers and other various tools required to complete tasks.

- Produce legible and accurate paperwork reflecting work performed. - **Students work must either be typed or have legible hand writing and use documentation or information found in either books or online from valid websites. All students must describe in detail on what issue was found, what was done to correct it, and verification that the issue was corrected.**
- Possess a valid state driver's license for conducting test drives. - **Students must be able to legally drive a vehicle in order to understand a customer complaint or verify that an issue was resolved.**

[Automotive Technician Job Description \[Updated for 2022\] \(indeed.com\)](#)

Job Requirements – Automotive Technician

You need to have good training in automotive and engine repair. You can also show the certificates of the workshops you've attended.

An automotive technician also requires an ASE certificate. - **To work in automotive heating and air conditioning, it is required to be ASE certified in order to use proper equipment for refrigerant removal and recharging, which can be obtained during the Auto 1760, after taking the course.**

You must have a valid driving license. - **This is essential for diagnosing and repairing any portion of the automotive system.**

You should hold a degree in an associate degree program in auto maintenance and repair.

- **WWCC offers the Automotive Technology, Associate of Applied Science.**

An automotive technician should also have the ability to provide customers with proper information and behave professionally during work hours. - **During all classes, students must demonstrate proper writing of repairs orders, or customer**

An automotive technician should also provide diagnosis on the vehicle to the customer - **The main goal that not is not only taught in the automotive program, but throughout WWCC, is good communication. Communication is key during any situation in finding a solution.**

They should also understand the automobile industry - **The program teaches students in every area of the vehicle that will play a role in the industry in becoming a technician.**

Lifting heavy objects is also part of the job. - **Teaching students to use the people or equipment around them to avoid injury to themselves or others is also encouraged throughout all automotive courses and in course Tech 1600.**

Hand-eye coordination is also crucial. - **It is critical when working with small components or trying to get into hard to reach areas, which are everywhere on vehicles.**

Previous experience working in the role of Automotive Technician is also an advantage.

- **Having background knowledge really helps students, but not required. The automotive program is there to teach anyone, from basics to advance levels of diagnosis, repairs and maintenance.**

Performing routine checkups on the vehicles is also part of the job. - **One key component that is taught is to keep an eye out for other problems that customers might not know about. This is taught throughout all courses.**

Automotive Technician Job Description - What Are the Duties of Automotive Technician?
(ncesc.com)

2 Degree Requirements

Approved degree requirements. Insert the approved current degree requirements for the program and/or where program courses are used to fill General Education requirements.

Response

Automotive Technology, Associate of Applied Science

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3 Faculty

1 Faculty Orientation and Evaluation

Describe the orientation and evaluation processes for faculty, including adjunct faculty and part-time faculty.

Response

The Automotive Program uses the Western Wyoming Community College orientation protocol for all new instructors, both full time and adjunct. We also attend meetings before each semester to receive any new or updated information regarding developments or changes in the institution. Trainings are always ongoing as technology demands changes in our program. Our faculty evaluations are done yearly by our division chair on their evaluation reporting form. Evaluations are also available for our students to grade the instructors, and give us some insight on our performance

2 Professional Development

Describe the professional development opportunities available to faculty and the budgetary resources allocated to professional development.

Response

In our Automotive program we have access to \$650 professional development funds for each instructor per year. We can also donate these funds to another instructor if needed. We utilize our professional development account for new training and instruction in our industry. Automotive ASE certification requires retesting every 5 years. Western Wyoming Community College also provides classes for their faculty and employees to add to their degree, or just to expand their knowledge.

3 Faculty Credentials

Complete the Faculty Credentials table with one row for each faculty member.

Response

Name	Credential	Teaching EXP.	Professional EXP	Rank
Steven Jackson Department	Some ASE Certifications Instructor Automotive	1-5 years	11-15	

4 Continuous Improvement

1 Assessment Planning

Describe the program assessment planning methodology, and how program and/or student learning outcomes, assessment measures, and benchmarks are selected. Provide three program learning outcomes with their corresponding measures and benchmarks.

Response

The assessments that are made are based on a number of factors, with them mostly having been done in the shop through Job sheets, having them demonstrate to me how they diagnose an issue, then having them fix issues with little to no direction.

The Job sheets that students follow and fill out, correlate with ASE and NATEF standards for automotive repair. This allows students to see issues that may have been over looked.

Having the students demonstrate their findings to me, shows that they are using the abilities that was taught to them. Students can use resources such as computers or books to help in the diagnosis of vehicle problems. The ability to use these resources shows that students have learned to gather as much information as possible.

Having students fix the repair, shows that the students can physically perform tasks required by the automotive field to be successful in their future endeavors.

Associated Outcomes



13-Demonstrate knowledge



14-Identify the root cause of problems



15-Graduate Employment

2 Assessment Reporting

Describe how program assessment data is collected and reported; include program-level collection procedures and findings. Provide between two and five years of assessment findings.

Response

Data is collected from advisory council meetings. Feedback from the community and industry leaders helps me get job placement for students.

Not much data is available, due to me being a new instructor, covid, and previous documentation not being there.

Associated Outcomes



[13-Demonstrate knowledge](#)



[14-Identify the root cause of problems](#)



[15-Graduate Employment](#)

3 Use of Assessment Results

Describe how the program assessment results are used. Cite specific assessment findings and evidence of how the findings are used. Provide two to five specific examples demonstrating how assessment results have been used to make programmatic decisions.

Response

The program assessment results are used to identify areas of improvement for students. The areas of improvements are based on feedback from our advisory council meetings.

Advisory council members stated that they are looking for mechanics/technicians who can diagnose issues properly. This includes engine mechanical issues and electrical.

The automotive program has 3 electrical classes which teach the basics of electrical, the diagnosis of electrical issues, and the use of a DVOM. The courses also introduce the use of scan tools.

The automotive program has several engine classes, which teach what components are inside various systems, the problems that arise with them. It also teaches how to diagnose the problems, how to repair the problems and what else to look for, when determining the cause of the problems.

These are the skills industry leaders, shop managers and employers that look for when hiring students from our institution.

4 Assessment Reflection

Provide an overall assessment summary, and three ideas about how future assessments will be improved.

Response

Overall, the feedback from all sources are great with helping us determine the course of action that is needed to getting students ready for the work force, the areas that need improvement and new areas that arise.

One area of improvement is expanding with new technology. New technology will help with showing new ways to diagnose issues.

Another is hearing from manufacturers themselves to know what could be done on the institutions end to better serve the industry. Students won't always stay in this area and may move. The knowledge they learn here can help them other places, but with feedback from manufacturers that have closer ties to other shops, could be a valuable tool.

Lastly, having the expansion of an electric vehicle program will help students, who are going into the field, get a handle on what is coming on later on down the road.

5 Evidence

1 Data to Support Decision Making

What data does the program use to support decision-making? Give examples of the data used and cite specific decisions where applicable. Provide two to three examples of data-informed program decisions, each example should include specific relevant data and an explanation of how the data was used to inform decision-making.

Response

The Automotive program conducts Advisory Council meetings, twice per year, to align our instruction and our ideas with industry needs. The automotive Advisory Council meetings talk with automotive shop foremans, shop employees and industry workers to see where the students need to focus on and where we need to work on getting the students knowledgeable to prepare for work when they leave our institution. We take any concerns under advisement and, if possible, implement those concerns into our course study. One such concern was the ability of students to understand the reading and following directions of manufacturer repair diagnosis, so that they would be able to follow direction for a quick and effective repair. We implemented this skill to all automotive courses. Another skill that was brought up was the ability of our students to use a scan tool accurately. All classes incorporate the use of a scan tool, a DVOM and following manufacture specifications for repair. Looking up diagnostic routes, wiring diagrams and general troubleshooting is a skill that is pushed to teach students to learn effectively.

2 Data to Support Program Engagement

How does the program actively engage other programs for feedback? Provide examples of active engagement and specific feedback received. Provide two to three specific examples citing program engagement with other programs, each example should include feedback from the other programs.

Response

Our School of Manufacturing and Industry Technology division instructors are also a part of our Advisory Council meetings. Any concerns from these programs are addressed and implemented to our course work, if possible.

The diesel instructor stays in contact with me so his students can learn from the automotive electrical courses. We maintain constant communication on where we can make improvements to help students achieve the goals that we have set forth.

The Automotive students take other courses in the institution to help better themselves for the job environment, such as Tech 1600, Industrial safety. This class is vital, as almost every place of employment focuses on safety on the job. Students also take ENGL 1010, English Composition I to learn how to enter notes for the customer, or for the company in the computer.

With all the resources mentioned above, students are able to get a helping hand when entering the work force.

6 Planning for the Future

1 Program Mission Statement

A Mission Statement should briefly describe the program. The program mission statement should closely align with the college mission statement.

Response

Put Your Passion to Work

2 Program Vision Statement

A Vision Statement should briefly describe program aspirations for the future.

Response

We aspire to teach, train and hone the skills in our trade to the highest levels possible, so our students can excel in their field. We plan the same for the future, with the exception of new advances in technology and industry requirements.

3 Planning Philosophy

Describe the philosophy that guides future program planning. Provide descriptions of decision points and evidence used in the program planning process.

Response

Our purpose is to educate our students, and prepare them for a rewarding career. We place a number of these students in high paying jobs requested from an assortment of industry employers. Last year we had a student start in a big chain tire/front end shop, several who have applied at various dealerships, and one who has moved from one dealership to another. I would like to promote more of the same for our future, but with more students graduating with a degree from Western.

4 Demonstration of Planning

Provide specific examples of how your program planning philosophy informs the development/implementation of a plan. Provide two to three specific examples of how the program philosophy informs the development and implementation of program plans.

Response

Our biggest influence on getting our students employed is our partnership with local industry. Through our advisory council, we receive input on what is needed from our program, then implemented to our course studies.

We also hold high standards for our inspection program. Our students in this class receive a head start on their ASE certifications, through the ASE testing and certification process. The ASE certification is our governing body for the industry, and the fail rate for this exam is close to 75% because of those high standards. Our students that go on to take this intense exam have a greater chance of passing the first time. Throughout our courses, our students have the opportunity to certify upon completion of that course. This certification is an invaluable part of their resume. It shows that this student has put in the effort and time to achieve the quality demanded by our industry. Some of our industry partners require certifications from our students for employment. It is also a skill that is learned that cannot be taken away and will stick with someone through out their life.

7 Strengths and Limitations

1 Strengths

Clearly describe three of the program's strengths.

Response

With the instructor working in the automotive field recently for the past 12 years, the instructor is experienced on what the critical areas to focus on. The instructor also is able to teach the students tips and tricks when diagnosing issues and what to watch for.

Automotive is a large part of our local and national economy making it a stable and beneficial trade in all areas.

Strong industry relationships that allows employment of students. We have placed students in good paying jobs all over the country.

Western Wyoming Community College is very affordable compared to other community colleges in surrounding area.

2 Limitations

Clearly describe three of the program's limitations.

Response

Economy could be considered a limitation in our field. With everyone trying to save money on "unneeded repairs" of their automobile to better save for downturns in economic short comings. This can hurt the mechanic with no work, or limited work.

Time is also a restraint. Automotive diagnosis and repair is a continuously evolving trade, with unlimited possibilities, making a two year degree seem short. Specialized training is usually done on the job because of this.

Space has always been a limitation, especially now with Covid 19 spreading us out. We have managed it well, following protocol set by the college

3 Aspirational Program

Identify a similar program at another institution as an aspirational point. Describe why this program was selected and why it is considered an aspirational reference point.

Response

Laramie County Community College would be good role model. They stay up to date on current automotive industry trends and guided diagnosis. LCCC has ASE certified Instructors that are able to help and guide students on their findings and offer help when needed. Quality students come from places with great instructors, and LCCC has great instructors.

8 Resource Adequacy

1 Human Resources

Identify and evaluate the adequacy, availability, and sustainability of program human resources.

Response

At our current class enrollment levels, the program meets the adequacy, availability, and sustainability of the programs demand. The current full time instructor are covering the enrolled students. Classes are available 8:00am to 9:00pm Monday thru Thursday. The current instructors have vast experience in the Automotive Industry and remained up to date with advisory council input and training.

2 Information Technology Resources

Identify and evaluate the adequacy, availability, and sustainability of program information technology resources.

Response

Currently the Automotive Technology program utilize primarily Perkins grant, yearly budgets and other grants that become available to address funding which directly ties to the adequacy, availability and sustainability of the program information technology resources. The program is not aware of any changes that is going to occur to this funding. As long as funding is available at the current level, the program information P a g e | 17 technology resources will be at an acceptable level. With the current financial situation for the state of Wyoming, the program does not see an increase in funding in the near future. With additional funding the program could expand the adequacy and availability of the programs information technology resources.

3 Physical Resources

Identify and evaluate the adequacy, availability, and sustainability of program physical resources.

Response

Currently the Automotive Technology program utilize primarily Perkins grant, materials budget, student fees and industry donations to maintain the physical resources for the program. The program may have to increase student fees to keep up with increase in consumable costs. With the current financial situation for the state of Wyoming, the program does not see an increase in funding in the near future. With additional funding the program could expand the programs physical resources

4 Financial Resources

Identify and evaluate the adequacy, availability, and sustainability of program financial resources.

Response

Perkins grant funding has remained consistent over the last five years. However, budget funding has gone down and forced the program to rely more on material conservation to maintain the programs. Student fees are evaluated on a yearly basis and raised as necessary to help offset program cost. However, it is not possible to raise student fees to cover equipment, only consumables.

9 Organizational Impact

1 Positive Impact

Describe ways that the program has a positive impact on the institution.

Response

Some of our students in our automotive program are interested in becoming full time mechanics, either in a dealership or working for an independent shop. Most of our students leave the institution with knowledge on how to diagnose and repair various areas on vehicles, which makes them more likely to obtain a job with no real issue.

We offer 14 different automotive classes, and the ability to get ASE process started after the end of them all. Students and auto graduates, can use their schooling as a 1 year credit to their ASE certification. Students are also able to build relations with the local dealerships or shops, so when they complete their schooling, they have the ability to start almost immediately.

2 Functional Improvements

Describe a substantive change the program may undergo in the next two years to enhance the success of the institution.

Response

Our program has made some substantial changes in the last couple of years. Our lab has been organized to better serve our students, and some of our course work has been updated to better serve our industry.

We have plans to implement a Hybrid/Electrical vehicle course, to better benefit the change in automotive industry. With electric cars becoming more and more popular, it is in the best interest that we offer courses to help and teach students to adapt to this incoming change.

Recruitment is always a substantial way to benefit our institution. Our student numbers have always been good, but can always improve.

