Automotive Service Technology

2019 Program Review

AST Completion Ceremony Winter 2019

March 21st, 2019

1. Program/Discipline Overview:

A. What are the educational goals or objectives of this program/discipline? How do these compare with national or professional program/discipline trends or guidelines? Have they changed since the last review, or are they expected to change in the next five years?

The Automotive Service Technology program's goals focus on preparing students to enter the automotive service and repair industry as an apprentice level technician. Students learn how to make ethical decisions about repair and service needs for customers, write repair orders, prepare estimates, perform diagnosis and repair, and communicate recommendations and repairs to customers.

The program completed evaluation by ASE (Automotive Service Excellence) Education Foundation (the accrediting body for automotive secondary and post-secondary programs) in March 2016. The ASE Education Foundation evaluation team recommended an unconditional certification for another five years. In May 2018 our advisory board successfully completed a midpoint compliance review. Our next full review will be in March 2021. Being ASE Education Foundation certified ensures that we are meeting the professional guidelines set-forth by industry to educate future technicians. The ASE Education Foundation standards are reviewed every year and changes are made to reflect industry needs. We make sure we continue to update our curriculum to ensure ASE Education Foundation compliance.

B. Briefly describe curricular, instructional, or other changes that were made as a result of your SAC's recommendations in the last program review and/or the administrative response. *(The administrative response can be found opposite your SAC's listing at the web page where the Program Reviews are posted – look for the "AR" pdf.)* Note: Any changes NOT made as a result of the last program review should be described in the appropriate section elsewhere in this template.

The AST program has reorganized our curriculum to better help student understanding and comprehension of material as well as complete the program in 2 years. The Electrical/Electronics courses (AM 161, 162 and 163) have had major overhauls due to new faculty with more recent industry experience in current technologies on newer vehicles. Job Finding Skills (CG209), Engine Repair (AM111) and Heating, Ventilation and Air Conditioning (AM171) have been reordered to better align curricula with student understanding and comprehension. To improve student success and completion of the program, we have removed 4 credits of CWE (a road block for students) and have added an approved elective list. The AST department tried CAS 133 as a program prerequisite to improve incoming student success in computer literacy but discovered that we found no empirical evidence of improvement and so removed this prerequisite. We have also updated our tool requirement to improve student success and provide students with the highest quality tools to start their careers in industry. All AST students are now required to wear approved uniforms consisting of work shirts, program hooded sweatshirt, and safety glasses.

2. Outcomes and Assessment: Reflect on learning outcomes and assessment, teaching methodologies, and content in order to improve the quality of teaching, learning and student success.

A. Course-Level Outcomes: The college has an expectation that course outcomes, as listed in the CCOG, are both assessable and assessed, with the intent that SACs will collaborate to develop a shared vision for course-level learning outcomes.

i. What is the SAC process for review of course outcomes in your CCOGs to ensure that they are assessable?

The AST Department utilizes Fall and Spring SAC meetings as well as weekly department meetings to ensure our CCOG's are up to date and assessable. We address CCOGs when we consider curriculum changes and reflect on end of year assessments. This is to ensure that we can continue to improve on student attainment of CCOGs.

ii. Identify and give examples of changes made in instruction, to improve students' attainment of course outcomes or outcomes of requisite course sequences (such as are found in in MTH, WR, ESOL, BI, etc.), **that were made based on the results of assessment of student learning**.

We noticed that students were having difficulty completing the first term course sequence and so included Job Finding Skills (CG 209) as a concurrent course that is taught to first term students in their current classroom after their auto shop classes are over for the day. This keeps the location the same and helps to build and further solidify relationships of the cohorts for the two years they will be in the program. We realigned first term courses to better help build a foundation for student success (AM 100, AM 161 and AM 162). The Brakes and Steering/Suspension courses have been upgraded to include technology such as hybrid vehicle braking system operation and brake bleeding, electric parking brakes, advanced vehicle alignments including steering wheel sensor resetting and ADAS (advanced driver avoidance systems). Electrical course series have been upgraded to most current technology including labscope use, solid state/module controls of electrical circuits such as PWM lighting and diagnosis and repair of vehicle module communication faults. In AM111 (Engine Repair) we retired our old technology 2.8L carbureted push rod engines and now teach on the 2.0L dual overhead cam timing belt engine. This change was instituted to give the students experience working on a more advanced engine that is more current to the technology in today's cars. To do this it was necessary to purchase 12 new engines. We also purchased 12 new 3.6L GM engines for use in engine repair class. When we describe these as "NEW" engines what we mean is "New To Us (Used)". The old 2.8L engines were donated to the Tigard High School Automotive program along with all of the parts we had in stock. We continue improvement and integration throughout all classes and regularly consult our advisory committee to determine if any additional changes are needed. Each term, all completing students are interviewed by industry representatives during the final capstone course of Auto Shop Lab III (AM 203) and this information is used by the program, along with TSA results to help guide changes to curriculum.

The 2014 Program Review listed recommendations of:

- Budget for an increase in the number of student computers
- Install enough band width to accommodate computer use

These changes have been made to help students achieve our program outcomes.

B. Addressing College Core Outcomes

i. Update the Core Outcomes Mapping Matrix. http://www.pcc.edu/resources/academic/core-outcomes/mapping-index.html For each course, choose the appropriate Mapping Level Indicator (0-4) to match **faculty expectations for the Core Outcome for passing students**. (You can copy from the website and paste into either a Word or Excel document to do this update, and embed it in your report or provide as an appendix. Or, you may send the revised matrix to Susan Wilson, swilson@pcc.edu, in advance of your program review due date so she can update the web page; then, you can insert a link to the web page in the body of your report).

Please see updated core outcomes at the link below:

https://www.pcc.edu/resources/academic/core-outcomes/am.html

C. Assessment of Core Outcomes (LDC) or Degree and Certificate (CTE) Outcomes.

i. Reflecting on the last five years of assessment, provide a brief summary of one or two of your best assessment projects, highlighting efforts made to improve students' attainment of the Core Outcomes (LDC-DE disciplines) or Degree and Certificate Outcomes (CTE programs). *(If including any summary data in the report or an appendix, be sure to redact all student identifiers.)*

Please see the attached 5-year TSA spreadsheet in the appendix. It is sorted by year and test result with a cross-reference to demographic data. We have attempted to try and identify any demographic information that might correlate to lower test scores and determine if there might be factors that we could improve in the program related to student attainment of benchmarks. At this point, we cannot identify any particular factors that are impacting student learning. We will continue to run this report each year and use it during our annual program assessment to identify any trends that might be harming student success.

The AST Program also utilizes a student portfolio project that is compiled throughout the 2 year program. Each course sequence (8 ASE content areas) has students complete a portfolio project consisting of a "live" real life automotive repair. These are scored and consist of a narrative case study, vehicle inspection form and completed AST repair order which includes calculation of parts and labor costs, documentation of the 3 "C's" (customer Concern, Cause and Correction) and ethical billing of labor to the customer. During the Auto Shop Lab "capstone" courses, portfolios are again reviewed, resumes updated and ASE student certifications/AC Handlers licences compiled. All of this culminates in the AM 203 capstone portfolio review which consists of industry hiring managers, shop owners and technicians interviewing students and critiquing their portfolios and interview skills. This review gives industry a chance to meet and help our students be better prepared for job interviews

when they search for employment and gives our students a chance to practice their interviewee skills and become more "at ease" when they search for employment. We have had great success with our portfolio reviews and both Chemeketa and Clackamas Community Colleges have visited and instituted this same process in their automotive programs. We cannot have done this without the help and continued support of Margaret Ragen from the Northwest Automotive Trades Association (NATA). Please see that attached portfolio information in the appendix.

In the 2014 "AR" it was suggested "students share their portfolios and portfolio review experience with other students". Each term the day after portfolio review we get two student volunteers to visit the two classes that are in their first and second term. They share their portfolio with the students and describe the experience of portfolio review. The new students get a much better understanding of what they are trying to accomplish with the preparation of their portfolio and why it is so important.

ii. Do you have evidence that the changes made were effective by having reassessed the same outcome? If so, please describe briefly.

Yes, since the AST Program assesses all outcomes each year, we have noticed that in those courses (Brakes and Suspension and Steering) with the lowest TSA scores, the course updates have improved the results to be more consistent with the scores from the rest of the program courses. It appears that the increase in scores have occurred after faculty have retired and new faculty have updated curriculum to reflect new technology and collaborated with current faculty on best practices and content delivery methods. As a SAC, we have all been "stepping up" our game to integrate new content delivery methods as well as sharing our curriculum with each other (G-suite) to make course sequence changes more fluid and familiar to students. We have also been trying to provide as much information to students as we can in as many formats as we can. All faculty provide copies of their notes or presentations to students and most do so using D2L.

iii. Evaluate your SAC's assessment cycle processes. What have you learned to improve your assessment practices and strategies?

The AST Program follows the college's annual assessment cycle and includes assessment of all outcomes every year. Students graduate each term and are assessed during their final capstone course (Initially AM 201, now assessment was moved to AM 202 starting Fall 2018). We feel the assessment timeframe for students and annual reporting cycle is adequate and does a good job of representing our students exit skills and reflects the material covered in the program.

iv. Are there any Core Outcomes that are particularly challenging for your (LDC-DE) SAC to assess, or difficult to align and assess within your (CTE) program? If yes, please identify which ones and the challenges that exist.

All of the AST Programs outcomes align with the college's core outcomes and have been mapped and updated to reflect curricular changes. We feel that we have aligned our outcomes well and have the necessary tools to adequately assess these outcomes.

v. CTE only: Briefly describe the evidence you have, determined by direct assessment, that students are meeting your Degree and/or Certificate outcomes.

The AST Program (Perkins Funded) utilizes the TSA to assess all of our Degree and Certificate outcomes each year. Please see the attached 5-year compiled TSA data in the appendix. Our student completion rate for the ASE Student Certifications (TSA) is 1420 out of 1456 or 97.5%. A total of 172 students completed these tests during the 5 years from Fall 2012 to Spring 2017. Of these 172 students, only 1 did not complete the program and accounted for 7 out of the 36 tests that did not meet the benchmark.

Katie Harms, Sherwood Automotive Technician, an AST AAS Graduate response:

I started the automotive program at PCC with no experience at all. I had never worked on a car a day in my life. Through the provided curriculum and guidance from teachers I was able to learn the skills, tools and basic theory I needed to find and keep employment in the industry. I graduated with my Associates degree in automotive technology and all of my student ASE certifications. I am currently employed as a full-time technician at an automotive repair shop.

About a year into the program I was asked to participate in the advisory board. I said yes because I believe if there is an opportunity to shape my education and help the future education of others I should. Since my time on the advisory board I witnessed many positive changes. One of the biggest struggles many students, including myself, had was affording and having access to the tools required for the program. One of the things the advisory board has done is work with teachers to make the required tools list more practical and accessible to students. Students are now able to purchase their tools through the bookstore at a very affordable price. This has made the program more accessible to people who would have previously struggled to purchase the required tools.

Being a part of the advisory board has been a very positive experience for me. I believe it is an important part of the program. Having business owners and shop managers input on equipment and worksheets student use to learn diagnostic skills is invaluable.

This program is geared to help student succeed while still teaching the necessary knowledge to start successfully in the industry. The program not only teaches the basic theory, it teaches responsibility and dependability. Every student, except one, I started the program with graduated the program. This is evidence that the program provides the needed information and skill training for a student to succeed. I thoroughly enjoyed my time in the program and it changed my life in a very positive way. I continue to enjoy and grow as a technician and as a person through my continued relationship with the advisory board.

3. Other Instructional Issues (Note: for questions A-C, specific information can be found at: https://www.pcc.edu/ir/program_profiles/index.html**)**

This link is to the Program Review Dashboard Data Tables, use the pull down menu to select the subject/course you are wanting to look at and the dashboard will display the data for 5 years trend;

Here are the *Printing Guidelines*

The profiles in dashboards are organized by following areas;

FTE & Headcount
Race/Ethnicity
Gender
Age
Collegewide Grade Counts
Campus Grade Counts

A. Please review the data for course enrollments in your subject area. Are enrollments similar to college FTE trends in general, or are they increasing or decreasing at a faster rate? What (if any) factors within control of your SAC may be influencing enrollments in your courses? What (if any) factors within control of the college may be influencing enrollments in your courses?

AST enrollment and FTE numbers are better than the overall college data except for year 2016/17. Enrollment and FTE dropped during this A/Y as a result of implementation of changes to the number of credits required to complete both the certificate and degree.

B. Please review the grades awarded for the courses in your program. What patterns or trends do you see? Are there any courses with consistently lower pass rates than others? Why do you think this is the case, and how is your SAC addressing this?

All of the AM courses have a pretty standard distribution with pass rates being similar in all but the first term courses. These courses (AM 100, AM 161 and AM 162) introduce students to the department and do act as a bit of a gatekeeper with Job Finding Skills (CG 209) for continued success in the program. These courses are used to ensure students obtain their uniforms, tools and complete CG 209 for continuation in the program. All students are on-boarded during orientation sessions and then must meet certain deadlines during first term courses to continue in the program.

C. Which of your courses are offered online and what is the proportion of on-campus and online? For courses offered both via online and on campus, are there differences in student success? If yes, describe the differences and how your SAC is addressing them. When referencing classes taught online, it is acceptable to refer to those offerings as 'OL.' In the PCC vernacular, 'Online Learning' has replaced 'Distance Learning (DL)' in the PCC vernacular due to the recent name change of the Online Learning Division.

All AM courses have some online component (D2L or Pearson online course material); the AST Department does not offer any AM courses solely online.

D. Has the SAC made any curricular changes as a result of exploring/adopting educational initiatives (e.g., Community-Based Learning, Internationalization of the Curriculum, Inquiry-Based Learning, etc.)? If so, please describe.

No.

E. Are there any courses in the program that are offered as Dual Credit at area high schools? If so, describe how the SAC develops and maintains relationships with the HS faculty in support of quality instruction.

Yes, the AST Program currently articulates Introduction to Automotive (AM 100) with local High School automotive programs (Benson, Hillsboro, Tigard, Aloha/Beaverton and St. Helens). Department faculty serve on the High Schools advisory boards, meet yearly with instructors at the Dual Credit Summit and review syllabuses, course content and facilities for compliance with PCC AST standards.

F. Please describe the use of Course Evaluations by your SAC. Have you created SAC-specific questions? Do you have a mechanism for sharing results of the SAC-specific questions among the members of your SAC? Has the information you have received been of use at the course/program/discipline level?

Yes, we include the following SAC-specific questions:

- The program was responsive in meeting my tool and equipment needs.
- The instructor clearly explained the program attendance requirements.
- The department's textbook and electronic information systems (Mitchell/Alldata) were helpful.
- The department's computers and internet access were efficient.
- My instructor emphasized the importance of personal safety.

The SAC does meet regularly and could discuss results but the mechanism to obtain SAC-specific questions is cumbersome (all instructors bringing their own reports vs. one large report) and the response rate is very poor bringing into question the validity of the results.

The SAC has found some useful information from the course evaluations but it is limited in scope and we feel that often times, in-class surveys/questionnaires solicit more information than the college course evaluations.

4. Needs of Students and the Community

A. Have there been any changes in the demographics of the student populations you serve? If there have been changes, how have they impacted curriculum, instruction, or professional development, and, if so, in what way?

The age of our students continues to be younger and we have seen a slight increase in the number of "under 20" category. On the opposite end of the spectrum, we are also seeing a steady decline in students in the 50+ category. This can probably be contributed to the robust job market and less need for older students looking for retraining opportunities.

B. What strategies are used within the program/discipline to facilitate success for students with disabilities? If known, to what extent are your students utilizing the resources offered by Disability Services? What does the SAC see as particularly challenging in serving these students?

The AST Department works with DS to accommodate student needs when applicable and reasonable. Testing is already Universal Design for all courses and includes extended time frames. Some students do use resources from DS but the number is estimated to be less than 5%. The AST SAC sees no major challenges but also recognizes that we cannot always accommodate all DS requests due to the nature of the industry and the work required to complete the program.

C. What strategies are used within the program/discipline to facilitate success for online students? What does the SAC see as particularly challenging in serving online students?

AM courses make use of online learning through D2L and Pearson online content. Supplemental materials, tests and HW quizzes are delivered in this format. Kahoot! Interactive quizzes are utilized for team collaboration, to facilitate class discussions and provide real-time assessment of student understanding. Online content is used by the program to enhance classroom content and create additional learning opportunities at times more convenient for our students. We do not deliver any AM courses solely online. Our students do use online service information systems in all of their classes. Most access this content through computers within the department. Students are required to research service information for many of the lab activities and worksheets they do in their classes.

D. Has feedback from students, community groups, transfer institutions, business, industry or government been used to make curriculum or instructional changes (if this has not been addressed elsewhere in this document)? If so, describe.

Yes, we use the automotive advisory committee to help with changes in curriculum, tooling and equipment. Examples of this can be seen in the Advisory Committee Meeting Minutes in the attached appendix. We also use changes within the ASE Education Foundation accreditation process to make changes to meet changing industry standards.

5. Faculty: reflect on the composition, qualifications, and development of the faculty

A. Provide information on how the faculty instructional practices reflect the strategic intentions for diversity, equity and inclusion in PCC's Strategic Plan, Theme 5. What has the SAC done to further your faculty's inter-cultural competence and creation of a shared understanding about diversity, equity, and inclusion?

When possible and not impacting instruction, faculty and staff attend college initiatives to further DEI. The challenge is that many of the opportunities that the college schedules for these seminars are during our teaching hours. 5 AST Faculy and 2 Staff were able to attend the Division Dean's Dialogue on Stereotype Threat in January 2019.

B. Report any changes the SAC has made to instructor qualifications since the last review and the reason for the changes. Current Instructor Qualifications are available at: http://www.pcc.edu/resources/academic/instructor-qualifications/index.html

In the "AR" of 2014 it was suggested that we address our Instructor Qualifications. That has been completed and submitted, updated IQ as of 1/2019. Awaiting approval.

C. How have professional development activities of the faculty contributed to the strength of the program/discipline? If such activities have resulted in instructional or curricular changes, please describe.

Faculty attended ASE/ASE Education Foundation conference for past 2 years. 2 Faculty attended the Automotive Training Expo's each of the last two years. All faculty are required to complete a minimum of 20 hours of professional development/training each year as part of our ASE Education Foundation accreditation. Most faculty exceed the required minimum 20 hours of training in order to further enhance the curriculum and deliver the most relevant and updated technologies to our students. All AST Faculty and Staff are ASE certified Master Technicians which require continual recertification of all 9+ tests every 5 years.

6. Facilities, Instructional, and Student Support

A. Describe how classroom space, classroom technology, laboratory space, and equipment impact student success.

We are a program and an industry that requires space and equipment. The loss of a classroom and shop space, AM 101, has severely impacted instruction and led to overcrowding of shop space, reduction in lab time for students and created overall bad feelings within the department. Parking lot size has been reduced to accommodate ADA parking which impacts student learning by reducing the number of vehicles available for students to work on. The relatively new ASB building is quickly becoming overcrowded. Having to settle for the size of building during the bond construction process and needing to keep as much equipment in the storage building as possible to free up floor space in the shop has resulted in a constant shuffling of equipment, tools, and lab support parts.

B. Describe how students are using the library or other outside-the-classroom information resources (e.g., computer labs, tutoring, Student Learning Center). If courses are offered online, do students have online access to the same resources?

Students use the department's on-site computers to access service information and classroom related assignments/activities. ALL of the online service information systems that we use require a paid subscription with licenses for each computer that has access. For this reason we are not able to offer the students access to these information systems outside of the classroom/lab environment.

C. Does the SAC have any insights on how students are using Academic Advising, Counseling, Student Leadership, and Student Resource Centers (e.g., the Veterans, Women's, Multicultural, and Queer Centers)? What opportunities do you see to promote student success by collaborating with these services?

It's all about Stedman! We have a number of veteran students in the program at any given time and they are encouraged to use the Veterans Resource Center. Many of our students make use of the Ping-Pong tables outside ASPCC during their break and this helps to build camaraderie and a sense of family within the program. Students use both the Automotive Dept. and the Campus food pantries.

Note to LDC-DE SACs: In your report, put N/A for Section 7 and continue with Sections 8 and 9.

7. <u>Career and Technical Education (CTE) Programs only:</u> To ensure that the curriculum keeps pace with changing employer needs and continues to successfully prepare students to enter a career field…

A. Evaluate the impact of your program's advisory committee on curriculum and instructional content methods, and/or outcomes. Please include the minutes from the last three advisory committee meetings in the appendix.

The advisory committee reviews all changes within the program. Minutes are attached.

Scott LaPlante, Owner of Sherwood Auto Repair response:

I initiated my relationship with the advisory committee while I was a student in the program. The opportunity to be involved in the program at that level has always appealed to me. It has been said that if there is a committee that makes decisions about your education or career you should be on it. So I am.

My observation of the outcomes of the influence of the advisory committee is very positive. I have witnessed the advent of new technologies in automobiles and the automotive industry and the subsequent implementation of instructional tools, methods and information to stay ahead of the demand of the motoring public. The automotive advisory committee is dedicated to communicating the future of automotive technology to the staff of the automotive service technology program and the program has far exceeded the level of instruction needed to prepare the students to enter the workforce and continually meet the demand of industry accreditation.

I have enjoyed my alignment with the automotive program here at PCC because I see the results of my input and have benefited from the education both myself and through employees that have been through the program.

B. Describe current and projected demand and enrollment patterns for your program. Include discussion of any impact this will have.

Demand for technicians is extremely high. Prospective students may not be aware of all opportunities available in CTE programs such as automotive and can be impacted in their decisions by biases of some HS counselors and family.

Student demand is down from high enrollment years. We continue to have high interest in the program, especially during Fall and Winter quarters, with decreased interest in Spring. That said, the enrollment for the program has remained relatively steady. Our goal is to start a cohort of 20 new students each term. As with all programs, we experience some attrition from first to second year. We specifically offer only the AAS Degree and 2-Year Certificate to provide students entering this industry with enough education to achieve a life-long career with opportunities for advancement.

C. How are students selected and/or prepared (e.g., prerequisites) for program entry?

Students must attend a required information session, as well as submit a program application to demonstrate that they meet the RD/WR placement levels (readiness for RD/WR 90 or readiness for ESOL Level 8 or higher) and the math placement level (readiness for Math 58/60 or higher). Students who meet that criteria are then invited to attend an in-person advising and registration session, where the program expectations are again reviewed, and students are prepared for the first term in the program with registration overrides and a checklist of what they need for the first day of class, as well as what they need to do and supplies they need to have to be successful during the first term.

D. Review job placement data for students over the last five years, including salary information where available. Forecast future employment opportunities for students, including national or state forecasts if appropriate.

See attached job statistics data provided by the Jobs and Internships Office in the appendix.

E. Present data on the number of students completing degree(s) and/or certificate(s) in your program. Analyze any barriers to degree or certificate completion that your students face, and identify common reasons why students may leave before completion. If the program is available 100% online, please include relevant completion data and analysis.

The number of students completing the certificate and AAS degree has steadily increased with a big jump in 2017/18. This is most likely the result of reducing the number of credits required for the degree and certificate, changing the AM280A (CWE) requirement, making CG209 a requirement to complete in the first term, and offering additional approved classes that will meet the program elective requirement. We still experience some attrition and believe this can be attributed to some students getting jobs that offer full time opportunities, learning that this career field is not what they anticipated, and the "life happens" effect that makes it impossible for them to continue their education.

F. Is the program Perkins-eligible? If so, answer the questions below. If not, put N/A for F.

i. With which secondary school(s) does the program have aligned Programs of Study? Do PCC faculty meet with these HS program faculty on a regular basis?

Yes. We have dual credit agreements with all of the local high schools that have automotive programs. These include Hillsboro High, BSD Beaverton School District, Aloha High School, St. Helens High School, Benson High School, Tigard High School, and Sabin Skills Center. One of our faculty members is aligned with each of these schools and attend their programs advisory board meetings, as well as meet here each fall during the dual credit symposium. The instructors of these high school programs are on our email list for additional industry training offered through our program here at our facility. Some of the high school instructors also participate in these training events.

ii. Please describe the Technical Skill Assessments (TSAs) that are reported annually. Include information about the nature of the assessment, content covered, alignment of degree and certificate outcomes, when the assessment is taken by students, the number of completers, and the percentage of students meeting the identified benchmark(s) for the last 5 years.

The AST Program (Perkins Funded) utilizes the TSA to assess all of our Degree and Certificate outcomes each year. Please see the attached 5-year compiled TSA data in the appendix. Our

student completion rate for the ASE Student Certifications (TSA) is 1420 out of 1456 or 97.5%. A total of 172 students completed these tests during the 5 years from Fall 2012 to Spring of 2017. Of these 172 students, only 1 did not complete the program and accounted for 7 out of the 36 tests that did not meet the benchmark.

Utilizing demographic data for the past 5 years and cross referencing TSA data to IE data (some "G" numbers were unable to be found), it appears that the greatest correlation to student difficulty is whether or not they list themselves as first generation college students. Of the 18 students who did not meet at least one test benchmark; 9 indicate first generation status, 6 list as unknown and 3 list as not first generation. Age, GPA and number of credits taken/completed do not seem to have any particular pattern. Race/ethnicity and gender do show patterns (11 list as White and 18 are male) but we feel this is more a symptom of the overall makeup of the student body of the program/industry and sylvania campus than any particular correlation to success.

We have been making changes to better prepare students for entry into the program and success once they are in the program. As noted before, our Perkins program advisor, Stedman Bailey, helps guide students through the onboarding process via information sessions, prerequisite needs, Financial Aid funding opportunities and timelines. She also is available as a continued resource for degree and certificate planning, food insecurity assistance, conflict resolution and general awesome guide to life. CG 209 is also now a concurrent course taken during the first term. This course is held in the department and must be completed in order to continue in the program. Diane Jantze coordinates with department faculty to inform them of any first term students who are having difficulty in the CG 209 course so we can perform interventions during the program. This has helped tremendously in assisting students to stay on course and become acclimated to the requirements of the automotive program.

iii. What does the SAC consider to be the most impactful use of Perkins funding for your program?

STEDMAN!!!!!!!!!! Our program advisor is essential to the success of our program. She does all of the advising for students interested in the program. She delivers information sessions that help students decide if this program is the right fit for them. The student then meets with her to review prerequisites, application to the program, placement test results, and registration process to start their first term. Our advisor is also a great student resource to help sort out scheduling additional classes to meet degree requirements, daily conflict/issue coaching and advice, and a friendly person to talk to.

Recent changes in Perkins funding has taken $30K from our parts budget to keep our Perkins advisor employed full time. Our hope is that the college will fully fund Perkins advisors on "hard money" and return our budget A40409 budget to its full amount.

G. Describe opportunities that exist or are in development for graduates of this program to continue their education in this career area or profession.

The AST program is working on developing a short certificate. We have run several AM 199 developmental courses (Subaru-U, Light Duty Diesel, Hybrid/Electric Vehicle) to determine viability

and interest. This certificate would allow students in the program as well as graduates and industry working technicians to advance their skill set enabling them to develop or advance their career options. Subaru-U Training has garnered strong and sustained support and we have now moved this from an experimental 199 course to a full AM 190 class that is offered in the afternoons and can also be used to complete the AM elective requirement. Our hope is to perform the same conversion to Light Duty Diesel and Hybrid/Electric Vehicle courses to build out our proposed short certificate. We also run a "PCC Tech Training" arm that coordinates industrial training classes that use our facility to provide industry with much needed update training. These classes are often times attended by our faculty, staff, and students. "Tech Training" maintains a large email list of industry partners, automotive instructors, local businesses, fleet managers, and advisory board members to notify when we have these additional educational opportunities available. This was identified as a need in our last review.

8. Recommendations

A. What is the SAC planning to do to improve teaching and learning, student success, and degree or certificate completion, for on-campus and online students as appropriate?

We have been making changes to better prepare students for entry into the program and success once they are in the program. As noted before, our Perkins program advisor, Stedman Bailey, helps guide students through the onboarding process via information sessions, prerequisite needs, Financial Aid funding opportunities and timelines. She also is available as a continued resource for degree and certificate planning, food insecurity assistance, conflict resolution and general awesome guide to life. CG 209 is also now a concurrent course taken during the first term. This course is held in the department and must be completed in order to continue in the program. Diane Jantze coordinates with department faculty to inform them of any first term students who are having difficulty in the CG 209 course so we can perform interventions during the program. This has helped tremendously in assisting students to stay on course and become acclimated to the requirements of the automotive program. As are most CTE programs, the AST Program provides a pathway for high school students and assistance while in the program in class scheduling. All courses are scheduled by the department chair and tracked to ensure all students complete program courses. Our Perkins advisor helps students schedule all of thier AAS LDC courses to assist with completion of the degree.

We are developing our short certificate to help better prepare students and industry technicians for success in the field as noted in Section 7 Part G. We are also continuing our plans to integrate more EV(Electric Vehicle) curriculum and lab activities, including vehicles, as noted in Section 8 Part B.

B. What support do you need from administration in order to carry out your planned improvements? (For recommendations asking for financial resources, please present them in priority order. Understand that resources are limited and asking is not an assurance of immediate forthcoming

support. Making the administration aware of your needs may help them look for outside resources or alternative strategies for support.)

In 2015 funds were removed from our budget and transferred elsewhere. This is money that was spent out of our parts budget and our 4-fund account to help build “MakerLab” which is also the shop space that was taken from us that same year. This loss of space has impacted our ability to bring new manufacturer programs and industry training to the department. These changes by administration have negatively impacted student success. This is one of the reasons we are requesting a replacement shop on the same level as our current shop.

We hope to convince the college to replace the space removed from our program in 2016 with a new shop. This shop would look very similar to the ASB on the northside of our parking lot. The shop would be approximately the same size as the ASB but would have four shop doors on the front of the building. The space for this would be the parking spot and planter area on the south side of the parking lot. This space would help us relieve some overcrowding in our current shop. It would also be a space that we could deliver our additional certificate and industry training classes. With a new shop space we may be able to get manufacturers education program back here to PCC like the General Motors ASEP, or TESLA START program. This endeavor may be part of a new bond in the future and include industry contributions to support this change.

As listed in the last 2014 program review recommendations:

9. Budget for new Plug-in curriculum
10. Budget for instructor / staff training in Plug-in technology
11. Look for money available for supporting/developing “green technologies”

These are areas that we are still challenged on finding funding for. While we have had the opportunity to add new and updated equipment to replace old, aging, and outdated equipment these are some needs we still need to address to meet the needs of teaching current technology. Virtually every manufacturer is now producing an electric car model.

12. Assurances

Please put X’s next to all three boxes to verify that…

☒ faculty and FDCs at all of the campuses offering courses in this discipline/program have received a late-stage draft of the Program Review document.

☒all of the division deans offering courses in this discipline/program have been sent the late-stage draft.

☒the SAC administrative liaison has reviewed and had the opportunity to provide feedback on the final report.

2014 Administrative Response:

Administrative Response

AST

March 7th, 2014

We thank you for your tireless dedication to your profession, students and the community as you've created, maintained and improved the outstanding quality of the discipline .

Your presentations were thoughtful, thorough and well organized.

This response contains 4 sections: 1) Commendations, 2) suggestions/observations, 3) response to recommendations/areas of SAC needs and 4) Closing comments.

1. Commendations

*The inclusion of "ethical decision making" relative to repair and service

*ASE Eduction Foundation Certification

*Correction and update to class scheduling resulting from information learned during the last program review

*The creation of a Shop Lab Capstone sequence to facilitate the development of soft skills

*ASE certification for all full and part time faculty

*ASE testing for students during Capstone sequence

*Incorporation of ASE Eduction Foundation TSA test via ASE certification in 8 areas: Engine Repair, Automatic Transmissions, Manual Transmissions, Brakes, Steering and Suspension, Electrical/Electronics, Heating Ventilation and AC, and Engine Performance.

*The development and implementation of a student portfolio to assist in the assessment of non-technical skill acquisition

*Descriptions of 4 assessment methodologies: ASE Student Certification, Rubric for Auto Department Portfolio, Final Program Reflection (proposed), and Portfolio "Artifacts"

*The use of an Advisory Committee reviewed and approved rubric

*ASRT Faculty serving on high school advisory committees

*Active participation with area high schools through PACTEC and dual credit

*Effective use of embedded Perkins Advisor, who in addition to other functions helps ASRT students coordinate with OSD, Voc Rehab, PCC Counselors and others

*The inclusion of Hybrid Vehicle Technology based on guidance from Business and Industry

*Taking into account cost to students when considering the requirement for entering students to have a tablet computer

*The use of a modular based program enabling students to concentrate more fully on content while developing meaningful mentoring relationships with faculty

*Effective use of your Advisory committee

*Final program reflections by students during their capstone experience

*Use of student handbook to communicate program expectations to students

*The requirement that all first term students take CG-Job Finding Skills

*Playing a key role in upgrade training of community college and high school instructors during Summer Workshop

*The creation and use of a “vehicle inspection form” reflective of current industry practices

*Effective participation in bond design work and renovation, resulting in a more up to date facility

*The award of $200,000 from the Small Business Administration to develop curriculum in Hybrid Vehicle Repair and Maintenance

*Your work with a private company to install required safety signage free of charge

*The creation of the AVTG (Advanced Vehicle Training Group)

2. Suggestions and Observations

Regarding the issue of obtaining employment data for program graduates, we suggest you work with Laura Massey, Director of Institutional Effectiveness. She may be reached at laura.massey@pcc.edu or X-7700

We want to acknowledge the great work you are doing with assessments, including student learning outcomes and program outcomes. The use of the ASE exams to meet your TSA requirements, not only works well, but helps prepare students for the official exams later in their careers.

It was suggested that you consider having students share their portfolios, particularly with entering students, to give them an idea of what they are working towards. Given reluctance by students to share their entire portfolios, you might consider a version of a Poster Session in which students only share a small portion of their materials.

Mention was made of a recent retirement and the resulting need to hire a new, full time instructor

for next fall term. In looking at Instructor Qualifications posted for your program, it will be necessary to update them to include qualifications that would enable an instructor to teach somewhat of a full range of course offerings, since the ones listed are course by course. For technical assistance, you may contact Kendra Cawley, Dean of Academic Affairs. She may be reached at kcawley@pcc.edu or Ext 4481.

3. Recommendations

The Automotive Service Technology has some big challenges ahead of us. Some of these challenges are operational and will require us to think in new ways of delivering our curriculum. Many of them involve how we will keep up with new technology, keep current technology working, and maintain an excellent technical training program for students. We will have to be innovative in how we budget our funds, spend any additional funds available and find new funding sources. This program is a vital tool for students looking for a career, industry needing skilled workers, and working technicians struggling to keep up with current technology. Our challenge is to get the support we need from all of our customers (Industry, School, Students, and Industry Technicians).

Our budget will need to be able to support the increasing need for information subscriptions to enable vehicle communication tools to function on a yearly basis. These tools also need to be upgraded as industry changes the platforms they use for these tools. The most urgent need we have is for enough computers for students to be able to access on line information systems to obtain repair data. These computers do not need to be the high end computers the school buys for other

departments. Their main function will be an internet search device to access specific information sites i.e. All Data, and Mitchell On Demand.

In the last program review we discussed the possibility of changing the accounting guidelines for our parts budget. Our parts budget would be able to last through the year if when we sell a part to the customer when they pay for it the money would go back into our parts fund. This would enable us to have a parts budget that lasted until the end of the year. Eventually a portion of this budget would become self-sustaining.

The Automotive Service Technology Summary of Recommendations:

o Budget for an increase in the number of student computers

Please work with your Division Dean to determine the number and type of computers needed, along with their cost. In turn, the Campus DOI will work with your Division Dean to look for the needed funding.

o Install enough band width to accommodate computer use

Please work with Lucy Currey, Manager Campus Technology Services, to identify the specific need and associated cost. She may be reached at lcurrey@pcc.edu or ext 4386. Your DOI will work with your Division Dean to search for funding.

o Better funding for parts budget

More detail is needed, in that a review of A40901-04001 indicates you started FY 13 with a budget of $116,536. Sometime thereafter, $25,928 was removed from this account and transferred elsewhere. A total of $80,855 was spent with an available cash balance of

$9,752. While we understand the concept behind this recommendation, the numbers do not appear to support the need. If there is additional information, please provide it to your Division Dean and DOI. Dan, let's plan to meet with Brent and Dorinda to discuss this, as there seems to be some difference in budget data.

o Make the best use of the facility, tools, equipment, and resources that we have

We support this recommendation. As you move to making the "best use of the facility…" please provide an update to your Division Dean and DOI, as optimizing facility utilization is an important issue. Lessons learned and best practices, likely, will benefit others as well.

o Budget for new Plug-in curriculum

Please work with your Division Dean to identify a detailed plan along with the one-time costs involved in this recommendation. Your Division Dean and DOI will use this information to create a path forward.

o Budget for instructor / staff training in Plug-in technology

Please work with your Division Dean to identify a detailed plan along with the one-time costs involved in this recommendation. Your Division Dean and DOI will use this information to create a path forward.

o Budget for replacement of aging tools and equipment

Please work with your Division Dean to identify a detailed plan along with the one-time costs involved in this recommendation. Your Division Dean and DOI will use this information to create a path forward.

o Budget for new equipment to meet industry standards

Please work with your Division Dean to identify a detailed plan along with the one-time costs involved in this recommendation. Your Division Dean and DOI will use this information to create a path forward.

o Offer more fleet / technician continuing education classes

We applaud this recommendation, as in the past offering CEUs proved to be mutually beneficial to the industry and the Department, particularly through the generation of revenue to support your program.

o Monitor student progress to ensure more students complete CG209 and Co-op

We applaud and support this recommendation.

o Find and nurture new corporate/business sponsors

We applaud and support this recommendation.

o Get additional industry representation on our advisory board

We applaud and support this recommendation.

o Apply for grants and other funding sources that will help us support our program

We applaud and support this recommendation. Vanessa Wood has just recently been appointed as the interim Grants Director. She may be reached at Vanessa.wood@pcc.edu or ext 4656. Additionally, if you haven't already, we recommend you discuss this with either or both of our in-house NSF experts: Todd Sanders tsanders@pcc.edu ext 4654 and/or Pat Kraft pkraft@pcc.edu ext 8170.

o Look for money available for supporting/developing "green technologies"

If you haven't already, we suggest you reach out to and make your interests known to some or all of the following, as they work closely in the areas of sustainability. Kim Smith, PCC's Regional Director for the Center of Excellence concerning sustainability kdsmith@pcc.edu ext 4097, Erin Stanforth, PCC's manager for sustainability erin.stanforth@pcc.edu ext 8581, Heidi Sickert, SPARC Chair heidi.sickert@pcc.edu ext 4465

4. Closing Comments

It was immediately obvious to us that you take great pride in your offerings and have dedicated countless hours to continuously improve them.

In closing, we want to thank you for a very thoughtful Program Review and engaging presentation.

Administrative Response submitted by Jeff S. Triplett on behalf of the Deans of Instruction and Dean of Academic Affairs.

Cheryl Scott

Jeff Triplett Marilyn Davis Kurt Simonds Kendra Cawley

Admin Response AST 2014

Appendix

Section 2 C and Section F ii

PORTLAND COMMUNITY COLLEGE
Auto Service Technology

Student Name:	Class:	Date:

Year:	Make:	Model:	Mileage:
VIN#:	License:	Mfg. Date:	Invoice#:

Coupe ☐ Hatch ☐ Sedan ☐ Wagon ☐ X-Cab ☐ Crew Cab ☐ ½ ☐ ¾ ☐ 1Ton ☐
PS ☐ AC ☐ ABS ☐ Stability Control ☐ 2WD ☐ 4WD ☐ AWD ☐

Customer Concern:

Parts:	QNTY	COST	TOTAL

Labor Operation:	*TIME*

LABOR HRS TOTAL 0.00

LABOR TOTAL @ $115 PER HR	0.00
PARTS TOTAL	0.00
TOTAL	0.00

Save Copy to Flash Drive

Service Information Resources Used:

☐ ProDemand ☐ ALLDATA ☐ Identifix ☐ Other

Cause and Correction:

Additional Recommendations:

Portland Community College
Automotive Service Technology
Vehicle Inspection Report
Student Name_____

Year _____ Make _____ Model _____ License _____

VIN _____ Mileage _____ Production Date _____

1	2	3	COURTESY INSPECTION	1	2	3	COMPLETE INSPECTION	
			Test Drive Checks				*Under Car Checks*	
			Bulb Check/Warning Lamps				Steering Linkage/Gear	
			Headlamps				Outer Tie Rod Ends	
			Turn Lamps				Inner Tie Rod Ends	
			Brake Lamps				Left Ball Joint/s	
			Other Lamps				Right Ball Joint/s	
			Wiper Blades				Front Sway Bar Bushings	
			Under Hood Checks				Rear Sway Bar bushings	
			Engine Oil				Front Control Arm Bushings	
			Transmission Oil				Rear Control Arm Bushings	
			Power Steering Fluid				Left Axle Boots/Shaft	
			Brake Fluid				Right Axle Boots/Shaft	
			Engine Coolant °F				*Brake Checks*	**Specs/Actual**
			Washer Fluid				**RF Brake Pads**	/
			Fluid Leaks (Type?)				**RF Brake Rotor**	/
			Air Filter				RF Caliper	
			Cabin Filter				**LF Brake Pads**	/
			PCV Valve / Filter				**LF Rotor**	/
			Timing Belt (sticker?)				LF Caliper	
			Drive Belt/s				Front Brake Hoses	
			Coolant Hoses				**RR Brake Pads/Shoes**	/
			Power Steering Hoses				**RR Rotor / Drum**	/
			Battery / Terminals				RR Caliper/Wheel Cylinder	
			Tire Inspections				**LR Brake Pads/Shoes**	/
			Tires/Inflation/Tread Depth				**LR Rotor / Drum**	/
			Left Front				LR-Caliper/Wheel Cylinder	
			Right Front				Rear Brake Hose/s	
			Left Rear				Front Wheel Bearings	
			Right Rear				Rear Wheel/Axle Bearings	
			Wheel Torque Spec/Verified			☐		

1 = OK

2 = Suggested

3 = Required

Notes:

Automotive Portfolio Requirements:

1. Current and complete resume (At least 2 additional copies for edits and sharing with employers). Suggest including a copy of your transcripts/grades and driving record.

2. ASE Student Certification, ASE A/C Handler's License, any other certifications/military history that would apply.

3. Examples of your best customer repair orders including documentation of strategies for problem solving (how did you diagnose the problem) and pictures for all 8 ASE areas.

4. Examples of thorough and well documented vehicle inspections attached to repair orders for all 8 ASE areas.

5. Examples of experience you have had diagnosing or repairing a car outside of class (include pictures, videos and an explanation/story of what you did).

6. Photo(s) of AST tool box, tools and any equipment you would bring to work.

7. Professional appearance and attitude.

Make sure to purchase a portfolio binder that is clean, professional and will allow you to add a cover page (with graphics or pictures). The binder should be about 1" in diameter but may need to be larger if you have a large body of work to display.

You will need at least 25 page protectors and I would recommend 50 so you have some spares.

A contents page and tabbed dividers need to be included for each of the first 6 sections. These are very helpful for employers to quickly access individual areas. The contents page should reference each of the above areas and be professional, typewritten and the first sheet when you open your portfolio. Include sub-dividers for your repair orders and organize them according to ASE area: A1- Engine Repair, A2 – Automatic Transmission/Transaxle, A3 – Manual Drive Train and Axles, A4 – Suspension and Steering, A5 – Brakes, A6 – Electrical/Electronic Systems, A7 – Heating and Air Conditioning, A8 – Engine Performance.

Employers are very interested in your tools and you should include pictures of what you will bring to the job. Transcripts and driving history are being asked for more and more, so you might include these with your resume as well. Each repair order you present should also have a completed vehicle inspection sheet attached to it.

Automotive Portfolio Scoring Guide:

1. Current and complete resume.
    - 1 = Missing contact information, poor grammar, inconsistent conventions (capital use, punctuation, etc…)
    - 4 = Complete and professional contact information including email, phone, address. Highlights skills and abilities. Professional appearance including punctuation and grammar.

2. ASE Student Certification, ASE A/C Handler's License, any other certifications/military history that would apply.
    - 1 = Less than 4 ASE Student Certifications and no A/C Handler's License.
    - 4 = 9 ASE Student Certifications, A/C Handler's License, Additional Certifications.

3. Good examples of customer repair orders.
    - 1 = Missing customer concern, missing cause and correction, unrealistic or miscalculated labor charges, poor grammar, inconsistent conventions (capital use, punctuation, etc…)
    - 4 = Complete customer concern, cause and correction including detail of diagnosis and repair. Labor charges are realistic and correctly calculated. All parts are listed and priced. Professional appearance including punctuation and grammar.

4. Examples of thorough and well-documented vehicle inspections.
    - 1 = Missing inspection or incomplete with no recommended repairs/service.
    - 4 = Complete vehicle inspection including all measurements and specifications. Recommendations are thorough and prepare vehicle owner for needed repairs.

5. Examples of experience(s) student has had diagnosing or repairing a car outside of class.
    - 1 = Explanation of repair is cursory and does not detail diagnostic procedures that were used (if applicable). Does not highlight skills and abilities used in repair and has no or poor photographs of repairs. Poor grammar, inconsistent conventions (capital use, punctuation, etc…)
    - 4 = Includes detailed explanation of repair and includes diagnostic procedures used if applicable. Highlights skills and abilities used in repair and includes photographs of repairs. Professional appearance including punctuation and grammar.

6. Professional appearance and attitude.
    - 1 = Does not introduce themself. Sits slouched. Does not answer questions or appears uninterested. Disheveled appearance.
    - 4 = Introduces themself. Sits professionally and shows interest in the conversation. Answers all questions well and asks questions showing interest in the interview process. Professional appearance.

7. Photo(s) of AST tool box, tools and any equipment they would bring to work.

- 1 = Missing photos of tools but does have “stock” tool list. Does not indicate any additional tools or plans on tools they would like to purchase.
- 4 = Complete tool list is included. Photos are high quality and show toolbox and basic hand tools. Additional tools already purchased and/or a “want list” is included highlighting tools needed to advance their career in the field.

Automotive Portfolio Feedback:

Please rate on a scale where 1 = Needs Improvement and 4 = Excellent.

Additional comments are very useful and are used for improvement by students and the program! Student Name:_____

1. Current and complete resume.

   1 2 3 4

2. ASE Certificates/Other Certifications (9 ASE and 1 A/C Handlers)

   1 2 3 4

3. Examples of customer repair orders including documentation of strategies for problem solving (Includes example from all 8 ASE areas).

   1 2 3 4

4. Examples of well documented vehicle inspections (Complete with Recommendations, Clean, Deliverable to Customer).

   1 2 3 4

5. Example(s) of well documented vehicle repair outside of school.

   1 2 3 4

6. Professional appearance and attitude.

   1 2 3 4

7. Photos of well organized and professional tool box and tools that conform to industry standards.

   1 2 3 4

General Comments:_____

_____

_____

_____

_____

_____

Would you consider hiring this individual based on appearance, attitude, professionalism and portfolio presented?

☐ Yes ☐ No

NAME

STUDENT PORTFOLIO

	Completed
Binder and Cover (Clean professional binder with cover picture including name) (1)	
Resume (Up to date) (1)	

Classroom repair (documented with pics and description) (2)	

Pictures (Tool box and possibly hobbies related to automotive) (1)	
ASE Student Certifications and AC Handlers license (Photo copy) (10)	

Repair orders for 8 ASE areas (8)								
Engine Repair		Engine Performance		HVAC		Electrical		
Manual Transmission		Auto Transmission		Brakes		Suspension & Steering		

Vehicle inspections (8)								
Engine Repair		Engine Performance		HVAC		Electrical		
Manual Transmission		Auto Transmission		Brakes		Suspension & Steering		

Letters of recommendation (recommend at least one) (1)	

Independent Repair (Done off campus and documented with pics and description) (2)	

GUIDE FOR INTERPRETING RESULTS and TECHNICAL DATA

for the

2018 ASE ENTRY-LEVEL CERTIFICATION TESTS

Prepared by

NATIONAL INSTITUTE FOR AUTOMOTIVE SERVICE EXCELLENCE (ASE)

PREFACE

NOTE: Effective July 1, 2018 the ASE Student certification program was rebranded the ASE Entry-level certification program. Throughout this guide 'ASE Student certification' and 'ASE Entry-level certification' are used interchangeably.

This guide contains information on interpreting your students' results on the ASE Entry-level certification exams administered in spring or fall of 2018. Also, it includes documentation of the technical adequacy of the assessment program for its intended purposes.

Always use the Guide from the year of the test to interpret student scores. Because test forms change yearly, use the 2018 Guide to interpret results from tests given in 2018, the 2017 Guide for tests given in 2017, etc.

The National Institute for Automotive Service Excellence (ASE) offers the ASE Entry-level tests, which are appropriate for evaluating students who are near the end of their studies in the areas of Automobile Service and Repair, Collision Repair and Refinish, and Medium/Heavy Duty Truck.

The ASE Education Foundation administers the industry's accreditation program for career-entry Automobile, Collision Repair and Refinish, and Medium/Heavy Duty Truck training programs. The standards for becoming an ASE accredited program include specifications covering the content of instruction, tools and equipment, hours, and instructor qualifications. Concurrently, ASE conducts periodic analyses of the tasks and knowledge required to successfully perform many of the vehicle service jobs in the automotive industry. The task lists developed by ASE serve as the basis for the entry-level task lists. In this way, the contents of the ASE Entry-level exams are kept current, consistent with ASE, and linked to the specific tasks and knowledge requisite to the successful performance of the various automotive service occupations.

The examinations are intended for students completing two-year secondary or post-secondary automotive technician training programs.

Notice to organizations using the ASE entry-level examinations: The National Institute for Automotive Service Excellence (ASE) has developed these examinations expressly for use in the context of student evaluation and voluntary Entry-level, certification and all future revisions and refinements will be made in that context. ASE expressly disclaims any responsibility for the actions of organizations or entities which decide to use these examinations in any context other than voluntary entry-level evaluation.

Questions pertaining to this program should be directed to the ASE Education Foundation at 1503 Edwards Ferry Rd., NE, Suite 401, Leesburg, VA 20176. Phone 800-362-0544. Or, go to www.ASE.com/EntryLevel for more information.

TABLE OF CONTENTS

ASE ENTRY-LEVEL CERTIFICATION

Description of the Battery

The Entry-level certification assessment consists of three series of secure multiple-choice examinations: Automobile Service and Repair, Collision Repair and Refinish, and Medium/Heavy Truck.

Automobile

- Suspension and Steering
- Brakes
- Electrical/Electronic Systems
- Engine Performance
- Engine Repair
- Automatic Transmission/Transaxle
- Manual Drive Train and Axles
- Heating and Air Conditioning
- Maintenance and Light Repair
- Automobile Service Technology

Collision Repair And Refinish

- Painting and Refinishing
- Structural Analysis and Damage Repair
- Non-structural Analysis and Damage Repair
- Mechanical and Electrical Components

M/H Truck

- Diesel Engines
- Electrical/Electronic Systems
- Brakes
- Suspension and Steering

Each series is comprised of individual tests that relate to one or more of the technical areas under the ASE Education Foundation Standards. Students may be assigned a single examination, all examinations, or any combination of them. The examinations emphasize the application of knowledge and theory to tasks actually performed by automotive technicians.

The examinations may be administered twice annually. Separate student score reports are prepared for each of the examinations. There are 40 – 80 scored questions in each examination, but the tests as given will be longer because of the inclusion of unscored "pretest" questions. Administration time is recommended to be 60 – 90 minutes per exam. Each student will be given a pass/fail status on each test attempted. For each test passed, students earn an ASE Entry-level certification.

Test Development Procedures

Content Specifications
ASE periodically conducts analyses of the work of the motor vehicle technician in the various subject areas. Job Analysis Workshops involving subject matter experts from around the country are convened specifically for this purpose. The task lists contained in the program standards for ASE accreditation are tied to ASE's task lists derived from these job analyses. The task lists are then organized into content outlines. These subject areas are then weighted according to judgments of frequency and criticality of the tasks performed, and these weights are translated into numbers of questions in each content area. This provides the content specifications for the examinations. As described earlier, the task lists are designed to correspond to the tasks required to successfully perform the various motor vehicle service procedures.

Question Writing
Items (test questions) are written by groups of subject matter experts (SME's) who are selected and trained by the ASE staff. The item writing teams include faculty members of educational institutions as well as experienced, working automotive technicians.

After the SME's draft the items and assign content codes, the items are reviewed by other SME's for accuracy. They are then edited, formatted, and entered into a permanent item bank. SME's then review and approve all the text changes. Newly written items are tried out as unscored "pretest" items embedded into the test forms. Data collected in this manner are then used to identify any items that may not function properly so that they can be rewritten or discarded if necessary. All data are banked with the item text in the item banks.

Test Assembly
New forms of the exams are developed each year for each test title. Subject matter experts begin test assembly by selecting pretested, validated items from the bank for each of the examinations. All items chosen meet ASE specifications for accuracy and statistical performance. Items are selected so that each test form meets both content and statistical specifications. ASE employs state of the art psychometric procedures, including a 3-parameter logistic IRT (Item Response Theory) model to calibrate individual test questions. These statistics are used in form development to effectively pre-equate the exams, allowing instant scoring as soon as the exam is deployed. Items are also recalibrated during and after each deployment, allowing ASE to monitor the question's performance and detect any problems, including changes in an item's relevance or difficulty. This process contributes to consistency in form difficulty and other performance characteristics across school years. Instructors can have confidence that test forms are consistent in difficulty, free of problem questions, and meaningful in their reflection of a student's actual ability.

Items selected for the examinations are appropriately distributed among the tasks identified in the test specifications. Each form of the examination will sample the tasks, however not all tasks will be tested by each form of the examination. Relevant item statistics include discrimination (item-test correlation) indices that exceed 0.20 and a difficulty level (P-value) within the range of 0.20 to 0.90. Items with unsatisfactory statistics are discarded or rewritten. Each annual form may contain a combination of pre-tested and new items. Only pre-tested items count toward the student scores

Passing Standards
Passing standards are individually set for each of the examinations. The determination of passing scores for high-stakes examinations like the ASE Entry-level certification tests must be done systematically and with established procedures appropriate for such programs. Several methods are possible, but the one chosen as most appropriate is called a contrasting-groups approach. This method is based on actual performance of real students as opposed to item-level judgments made on test forms. Criterion groups of "should-pass," "borderline," and "should-not pass" students are selected in advance of testing. These selections are made by instructors with detailed knowledge of the level of preparedness of the students. After testing, a passing score is selected that minimizes the false-positive and false-negative classifications in the obtained score distributions of these groups. Passing standards set this way are generally regarded by instructors and administrators as more appropriate and more realistic than test-based judgmental approaches. These same passing standards are then carried forward to future forms of the ASE entry-level exams using the IRT equating process described above.

INTERPRETING RESULTS

The ASE entry-level exam score reports allow comparisons of a school's or individual's performance with that of others participating in the program during the same year. Changes in group performance from year to year can be tracked reasonably well using the national percentile ranks, within the limits of the data as described in the Performance Comparisons section. Mean scores and pass/fail proportions are calculated for each of the examinations. These are reported at the instructor and school level. State reports comparing all the schools in a state are provided to the designated state level supervisor.

Notice to Organizations Using ASE Entry-level Certification Examinations

The National Institute for Automotive Service Excellence (ASE) has developed these examinations expressly for use in the context of voluntary entry-level evaluation and certification, and all future revisions and refinements will be made in that context. ASE expressly disclaims any responsibility for the actions of organizations or entities which decide to use these examinations in any context other than entry-level evaluation and/or voluntary certification.

Performance Comparisons

Percentile Rank Tables

Following this narrative are tables of percentile ranks of the national population of examinees who took the current year's test forms in the spring administration. This is useful for comparing your spring or fall students' performance to the national sample. Individual scores and group means can be converted to percentile ranks. Instructions for using the tables are presented below each one.

Comparing Individual Students

Performance of individual students can of course be compared on the same test in the same year using raw scores. Percentile ranks, however, can be used to compare relative strengths across different tests. They are also useful for comparing a student's performance to the national sample. Remember that the statistics reported for each administration are based upon the group taking the examinations in that testing period, and do not include prior year's administrations.

Comparing Groups of Students

Mean scores of groups on the same test can be compared if they were tested in the same year. Raw score means and percentile rank equivalents can be compared this way. Percentile equivalents of group mean scores may also be compared across different test titles.

Comparing groups across years is a more complex matter. Percentile ranks provide the best metric for comparison, but even these should be used with consideration of the limits of the data. First, the groups being compared are likely composed of different students. Also, the national sample of students changes from year to year, and there is likely some variation in ability in these reference groups. To the extent that the ability of the national reference group changes, one classroom of unchanged ability could get different percentile ranks across years.

A critical issue is the extent to which the composition of your examinee group resembles that of any other group to which they are being compared. If population characteristics (e.g. age, amount of prior experience, etc.) account for differences between your students and another group, then the comparison may be of less use to you. You must make a judgment about any other characteristics that may contribute to differences in achievement, then decide how to interpret the comparison.

Also, remember that the means of small groups can be expected to contain increased sampling error, and so should not be interpreted to accurately represent the performance of any larger population. For example, if only a few students from a school take a particular test, their performance should not be assumed to represent all the students in that school.

SCORE REPORTS

Who Gets Reports

Reports are prepared for students, instructors, and state supervisors. Student level reports, available to both students and their instructor, include the number correct in each of the content areas, the total score, and pass/fail. The instructor report shows a summary of the information contained on that instructor's student score reports. State reports summarize the results in terms of mean scores and pass/fail rates from each school in that state and are available to the designated state level supervisor.

Score Reports Retention and Replacement

All recipients, including students, are allowed to keep their score reports. The ASE partner organizations do not provide a records-maintenance service, so duplicate or replacement copies of these reports are not normally available. Records are normally maintained in the test delivery system for the current and the two previous years and can be accessed according to the user's role in the system. Older data are not available.

Automobile Percentile Rank Table – 2018

Number Correct	Engine Repair (ER)	Auto Trans & Transxl (AT)	Manual Drive Train & Axles (MD)	Susp & Steer (SS)	Brakes (BR)	Elec/ Elec Systms (EE)	Heat & A/C (AC)	Engine Perfor (EP)	Maint & Repair (MR)	Auto Svc Tech (AS)	Number Correct
0-5	1	1	1	1	1	1	1	1	1	1	**0-5**
6	1	1	1	1	1	1	1	1	1	1	**6**
7	1	2	2	1	1	1	2	1	1	1	**7**
8	2	3	4	2	2	2	4	3	1	1	**8**
9	3	4	6	4	4	3	5	5	1	1	**9**
10	5	6	8	7	7	5	8	7	1	1	**10**
11	7	9	11	10	10	8	12	11	1	1	**11**
12	9	12	14	14	13	10	15	14	1	1	**12**
13	12	15	18	18	17	14	19	18	2	1	**13**
14	15	18	22	23	22	18	22	22	3	1	**14**
15	18	22	26	28	27	22	26	27	4	1	**15**
16	22	26	30	33	32	27	30	31	5	2	**16**
17	26	30	35	39	37	31	34	36	7	3	**17**
18	30	33	40	45	42	36	39	40	9	4	**18**
19	35	38	44	51	48	41	43	45	11	5	**19**
20	40	42	49	56	53	46	48	50	13	6	**20**
21	45	47	53	62	59	51	52	54	15	8	**21**
22	49	52	58	67	64	56	57	59	18	10	**22**
23	55	57	62	73	69	60	61	63	21	12	**23**
24	60	61	67	77	74	65	65	68	24	14	**24**
25	65	66	71	81	78	69	69	72	27	16	**25**
26	70	70	75	85	82	73	73	76	30	17	**26**
27	74	74	78	88	86	76	76	80	34	19	**27**
28	78	78	82	91	88	80	79	83	38	21	**28**
29	82	82	85	93	91	83	82	86	42	23	**29**
30	85	86	88	95	93	86	86	88	46	24	**30**
31	88	89	90	96	95	89	89	91	50	26	**31**
32	91	92	93	97	96	91	91	93	54	28	**32**
33	93	95	95	98	97	93	94	95	58	30	**33**
34	95	97	97	99	98	95	95	96	62	32	**34**
35	97	98	98	99	99	97	97	98	66	33	**35**
36	98	99	99	99	99	98	98	99	69	35	**36**
37	99	99	99	99	99	99	99	99	73	37	**37**
38	99	99	99	99	99	99	99	99	76	39	**38**
39	99	99	99	99	99	99	99	99	79	42	**39**
40	99	99	99	99	99	99	99	99	82	44	**40**
41									84	46	**41**
42									87	48	**42**
43									89	51	**43**
44									90	53	**44**
45									92	55	**45**
46									93	58	**46**

47									95	60	**47**
48									96	62	**48**
49									97	64	**49**
50									97	67	**50**
51									98	69	**51**
52									99	71	**52**
53									99	73	**53**
54									99	75	**54**
55									99	76	**55**
56									99	78	**56**
57									99	80	**57**
58									99	82	**58**
59									99	83	**59**
60									99	85	**60**
61										86	**61**
62										88	**62**
63										89	**63**
64										90	**64**
65										91	**65**
66										92	**66**
67										93	**67**
68										94	**68**
69										95	**69**
70										96	**70**
71										97	**71**
72										98	**72**
73										98	**73**
74										99	**74**
75										99	**75**
76										99	**76**
77										99	**77**
78										99	**78**
79										99	**79**
80										99	**80**

How To Use This Table

This table provides percentiles for interpreting tests administered in the spring or fall of 2018.
A percentile is the percentage of students who scored at or below a given score interval.

To use the table, find the student's Number Correct score for a given test in the left (or far right) column, and then look over to that test's column to find the percentile equivalent. For example, if a student scored 25 correct on Engine Repair, first find 25 in the left column. Then look to the right under the Engine Repair heading, and you will find 65. A score of 25 on the Engine Repair test is at the 65th percentile of the national population of students who took this exam in the spring of 2018.

Collision Repair and Refinish Percentile Rank Table – 2018

Number Correct	Struct Anlys & Dmg Rep (SR)	Nonstr Anlys & Dmg Rep (NS)	Mech & Elect Comp (ME)	Paint & Refinish (PR)	Number Correct
0-5	1	1	1	1	**0-5**
6	1	1	1	1	**6**
7	3	1	2	1	**7**
8	4	3	3	2	**8**
9	6	4	6	3	**9**
10	8	7	8	4	**10**
11	10	10	11	6	**11**
12	13	13	16	8	**12**
13	16	17	21	11	**13**
14	19	21	25	14	**14**
15	23	25	31	17	**15**
16	26	30	36	22	**16**
17	30	35	42	27	**17**
18	35	40	47	33	**18**
19	40	45	52	38	**19**
20	45	51	58	44	**20**
21	51	57	64	50	**21**
22	57	62	69	56	**22**
23	62	68	75	62	**23**
24	67	72	79	67	**24**
25	73	77	83	72	**25**
26	77	81	86	77	**26**
27	82	85	89	81	**27**
28	86	87	91	84	**28**
29	89	90	94	87	**29**
30	92	93	96	90	**30**
31	93	94	96	93	**31**
32	95	96	98	95	**32**
33	97	97	98	96	**33**
34	98	98	99	98	**34**
35	99	99	99	99	**35**
36	99	99	99	99	**36**
37	99	99	99	99	**37**
38	99	99	99	99	**38**
39	99	99	99	99	**39**
40	99	99	99	99	**40**

How To Use This Table

This table provides percentiles for interpreting tests administered in the spring or fall of 2018.
A percentile is the percentage of students who scored at or below a given score interval.

To use the table, find the student's Number Correct score for a given test in the left (or far right) column, and then look over to that test's column to find the percentile equivalent. For example, if a student scored 25 correct on Structural Analysis and Damage Repair, first find 25 in the left column. Then look to the right under the Structural Analysis and Damage Repair heading, and you will find 73. A score of 25 on the Structural Analysis and Damage Repair test is at the 73rd percentile of the national population of students who took this exam in the spring of 2018.

Medium / Heavy Truck Percentile Rank Table – 2018

7umber Correct	Truck Diesel Engines (DE)	Truck Brakes (TB)	Truck Susp & Steering (TS)	Truck Elect/Elect Systems (TE)	Number Correct
0-5	1	1	1	1	**0-5**
6	1	1	1	1	**6**
7	1	2	1	2	**7**
8	1	3	3	3	**8**
9	2	6	6	5	**9**
10	4	10	8	7	**10**
11	5	14	12	10	**11**
12	7	19	16	13	**12**
13	11	24	21	17	**13**
14	15	28	25	21	**14**
15	19	34	31	25	**15**
16	23	41	36	29	**16**
17	27	46	42	34	**17**
18	31	50	48	39	**18**
19	36	55	55	44	**19**
20	41	59	60	47	**20**
21	45	63	64	52	**21**
22	51	67	69	56	**22**
23	56	71	73	62	**23**
24	60	75	76	66	**24**
25	65	79	80	71	**25**
26	69	82	83	76	**26**
27	73	84	86	79	**27**
28	77	87	89	83	**28**
29	81	90	91	86	**29**
30	85	92	93	89	**30**
31	88	94	95	91	**31**
32	91	96	96	93	**32**
33	94	97	97	96	**33**
34	96	98	98	97	**34**
35	97	99	99	98	**35**
36	98	99	99	99	**36**
37	99	99	99	99	**37**
38	99	99	99	99	**38**
39	99	99	99	99	**39**
40	99	99	99	99	**40**

How To Use This Table

This table provides percentiles for interpreting tests administered in the spring or fall of 2018.
A percentile is the percentage of students who scored at or below a given score interval.

To use the table, find the student's Number Correct score for a given test in the left (or far right) column, and then look over to that test's column to find the percentile equivalent. For example, if a student scored 25 correct on Diesel Engines, first find 25 in the left column. Then look to the right under the Diesel Engines heading, and you will find 65. A score of 25 on the Diesel Engines test is at the 65th percentile of the national population of students who took this exam in the spring of 2018.

TECHNICAL DATA

Glossary of Terms

ASE computes both item- and test-level statistics as well as candidate performance statistics separately for each form of each of the examinations. Following this narrative are the data tables for the current forms of the exams. The information below is intended to help interpret the technical data in these tables.

Scored Items
This is the number of *scored* items (questions) in the test form. These are the validated questions that count toward an examinee's score.

Unscored Items
This is the number of unscored items (questions) in the test form. ASE "pretests" newly written or revised questions by embedding them into test forms as unscored items. These questions do not count toward the student's score and are not used in the derivation of any of the other test statistics contained here. Most often, test forms will contain about 10-20 unscored pretest items.

Mean
The mean of a set of scores is commonly referred to as the average. This is the sum of all scores divided by the number of scores.

SD (Standard Deviation)
The standard deviation conveys the spread of a set of scores. It can be thought of as the typical amount that scores differ from the mean score (although this definition is not precisely correct). It is calculated as the square root of the mean squared deviation. When the standard deviation is larger the scores are more spread out. As a rule of thumb, about two-thirds of the scores of a group are likely to fall within +/- one standard deviation of the mean.

Min Score
This is the lowest score obtained by any examinee during this period.

Max Score
This is the highest score obtained by any examinee during this period.

Mean P (Mean Percent Correct, or Item Difficulty)
The item difficulty, defined as the percentage of examinees answering the item correctly, is computed for each item. Items that are either too difficult (20% or lower) or too easy (90% or higher) are flagged and examined by subject matter experts for flaws. The mean item difficulty expressed as mean percent correct (Mean P) is provided for each test form.

Mean R (Mean Point Biserial, an Index of Item Discrimination)
This is the mean Point Biserial correlation between the examinees' selections of the correct options and total test scores. Correlation coefficients are used as indices of the discriminating power of the options within the items. The correct option should correlate positively with total score. Any items that fail to discriminate between examinees having high and low ability are subject to content review and may be either (1) eliminated or (2) rewritten and subsequently pretested as new items. The mean point biserials of the correct options of the items in each test are provided in the statistical tables, indicated by "Mean R."

Alpha (Coefficient Alpha, or Test Reliability)
The measurement of any cognitive characteristic contains some degree of inconsistency or error. For example, an examinee taking parallel forms of the same examination would likely earn somewhat different scores on the two forms. These differences might be due to sources of error originating with the examinee, the testing environment, or the examination itself. Reliability as considered here refers to freedom from random error originating in the test itself.

The reliability coefficients reported for the ASE entry-level examinations are measures of internal consistency computed by the Coefficient Alpha formula (also known as KR-20 in the dichotomous case such as this). Reliability coefficients range from zero to one, with a value of one indicating perfect reliability. The size of a reliability coefficient is affected by several factors including the degree to which the test items are measuring the same cognitive construct and the number of items in the test. All other things being equal, longer tests generally have higher reliability.

SEM (Standard Error of Measurement)
Error of measurement results from unreliability and refers to random error associated with a test score. Such error may inflate or depress an examinee's score. As measurement error goes up, reliability goes down and the standard error of measurement goes up. The SEM represents the standard deviation of a theoretical distribution of obtained scores scattered about the theoretical true score of the candidate. As such, it is a function of both reliability and the standard deviation of test scores. Standard error of measurement may be thought of as a "margin of error" that can be used to express the degree of confidence in the accuracy of a test score.

S-B Odd-Even
Another way to estimate test reliability is to correlate one half of the test with the other half, effectively giving two shorter tests at the same time and comparing them. In this case, the odd-numbered items are correlated with the even-numbered items to generate a "split-half" reliability coefficient. However, these underestimate actual reliability because the full length exam is of course longer and more reliable than each half. Therefore a Spearman-Brown correction is used to correct for this difference. The result is an "Odd-Even Split-Half Index with Spearman- Brown correction", another internal consistency type of reliability index.

Total Score Distribution
A histogram is provided of the total score distribution of each exam, also called a frequency distribution of scores. The height of each of the bars in the graph corresponds to the number of candidates in that score group. Taken as a whole, the histogram often resembles the familiar "bell curve" of the total population on the scored test items.

Validity

Validity refers to the degree to which interpretations of test scores are appropriate. For exams such as these, evidence of the appropriateness of the test content is the central validity argument, and proper test construction methods are the primary assurance that the exams can support the intended interpretations.

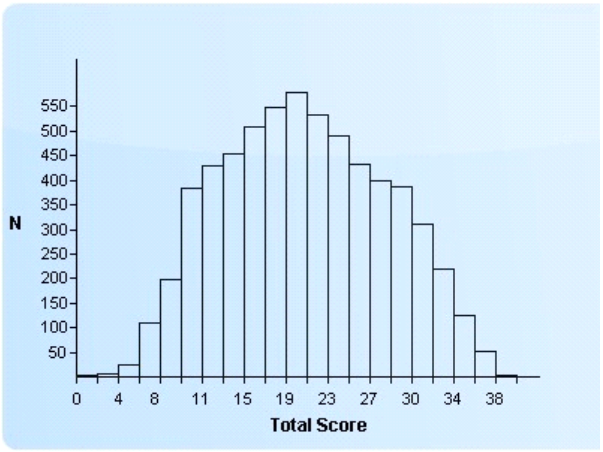
The ASE entry-level examinations are designed and constructed to assess examinees' mastery of the task lists identified in the Standards for program accreditation. The participation of subject matter experts on the item-writing teams and the item and test review processes are designed to ensure conformity of the tests with the approved task list. Following this, ASE staff select test items that are (1) appropriate to the purpose of the test, (2) suitably balanced over topics and skills, (3) free from irrelevant sources of difficulty, and (4) as a group, comparable with previous test forms in difficulty and other performance characteristics. These, plus other rigorous psychometric procedures for item development and test construction, provide excellent assurance of content appropriateness of the exams. ASE entry-level examinations are not intended to predict future success on any other test or endeavor.

ASE Entry-level Test Form Statistics - Spring 2018

Automobile

Test: Engine Repair (ER)

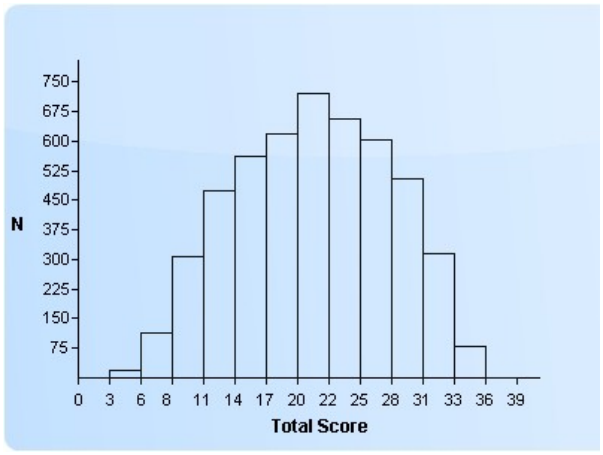
Scored Items	40
Unscored Items	15
Mean:	22.49
SD:	7.20
Min Score:	0
Max Score:	40
Mean P:	0.56
Mean R:	0.32
Alpha:	0.85
SEM:	2.83
S-B Odd-Even:	0.84



Total score distribution (ER)

Test: Auto Trans & Transaxles (AT)

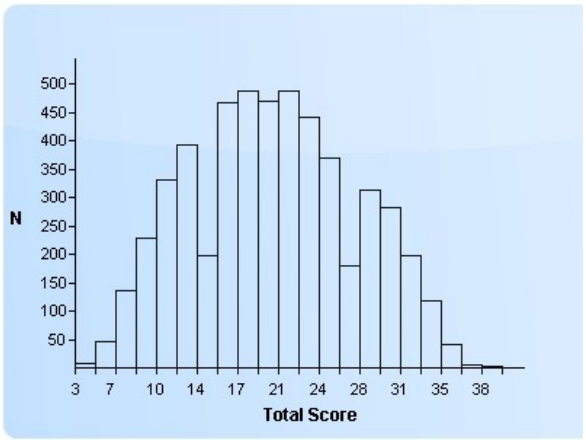
Scored Items	40
Unscored Items	15
Mean:	21.97
SD:	7.36
Min Score:	2
Max Score:	39
Mean P:	0.55
Mean R:	0.32
Alpha:	0.85
SEM:	2.88
S-B Odd-Even:	0.85



Total score distribution (AT)

Test: Manual Drive Train & Axles (MD)

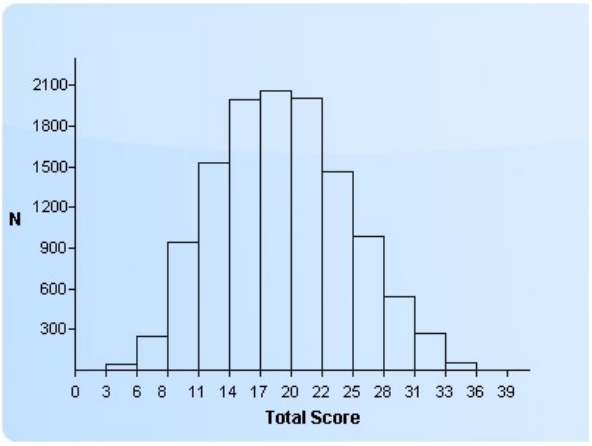
Scored Items	40
Unscored Items	15
Mean:	21.01
SD:	7.43
Min Score:	3
Max Score:	40
Mean P:	0.53
Mean R:	0.33
Alpha:	0.85
SEM:	2.86
S-B Odd-Even:	0.86



Total score distribution (MD)

Test: Suspension & Steering (SS)

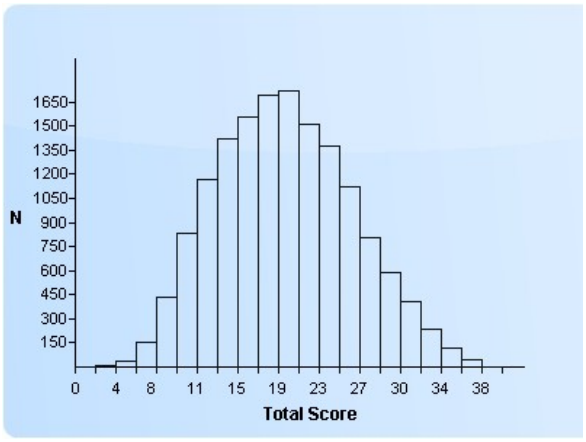
Scored Items	40
Unscored Items	15
Mean:	19.65
SD:	6.35
Min Score:	0
Max Score:	39
Mean P:	0.49
Mean R:	0.26
Alpha:	0.79
SEM:	2.90
S-B Odd-Even:	0.80



Total score distribution (SS)

Test: Brakes (BR)

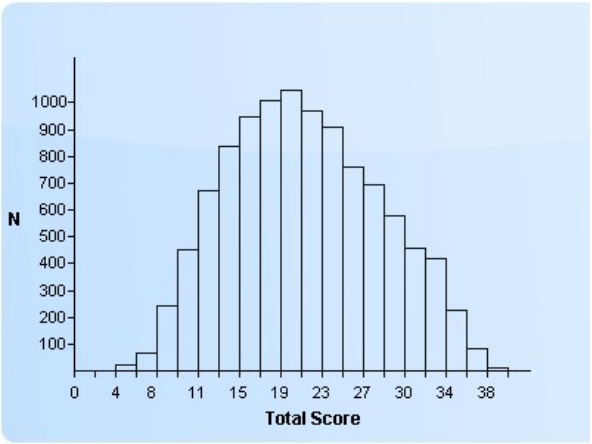
Scored Items	40
Unscored Items	15
Mean:	20.16
SD:	6.62
Min Score:	0
Max Score:	40
Mean P:	0.50
Mean R:	0.28
Alpha:	0.81
SEM:	2.87
S-B Odd-Even:	0.82



Total score distribution (BR)

Test: Electrical/Electronic Systems (EE)

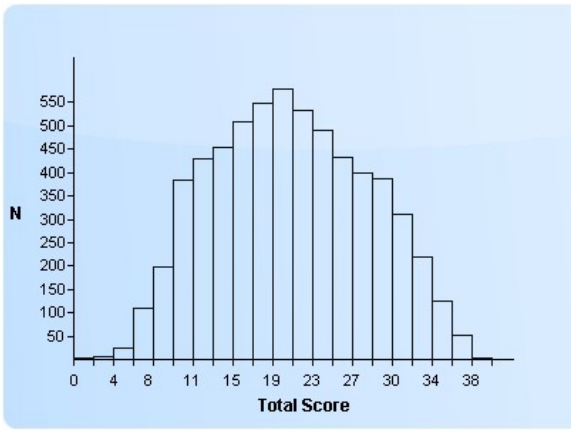
Scored Items	40
Unscored Items	15
Mean:	21.76
SD:	7.30
Min Score:	0
Max Score:	40
Mean P:	0.54
Mean R:	0.32
Alpha:	0.85
SEM:	2.87
S-B Odd-Even:	0.85



Total score distribution (EE)

Test: Heating and Air Cond (AC)

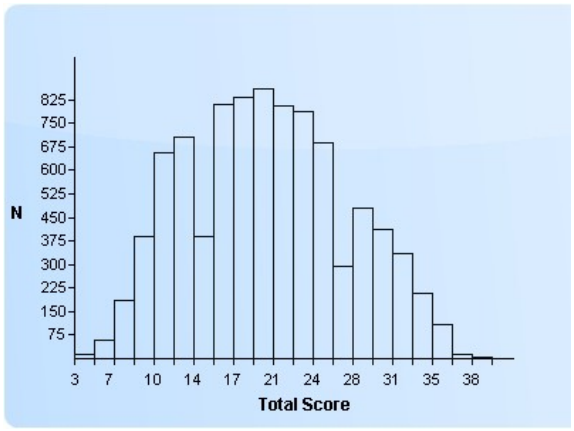
Scored Items	40
Unscored Items	15
Mean:	21.28
SD:	7.76
Min Score:	0
Max Score:	40
Mean P:	0.53
Mean R:	0.35
Alpha:	0.86
SEM:	2.85
S-B Odd-Even	0.87



Total score distribution (AC)

Test: Engine Performance (EP)

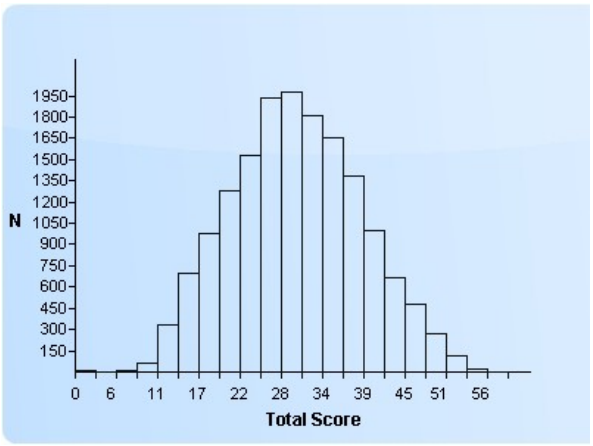
Scored Items	40
Unscored Items	15
Mean:	20.92
SD:	7.39
Min Score:	3
Max Score:	40
Mean P:	0.52
Mean R:	0.33
Alpha:	0.85
SEM:	2.85
S-B Odd-Even:	0.85



Total score distribution (EP)

Test: Maintenance & Repair (MR)

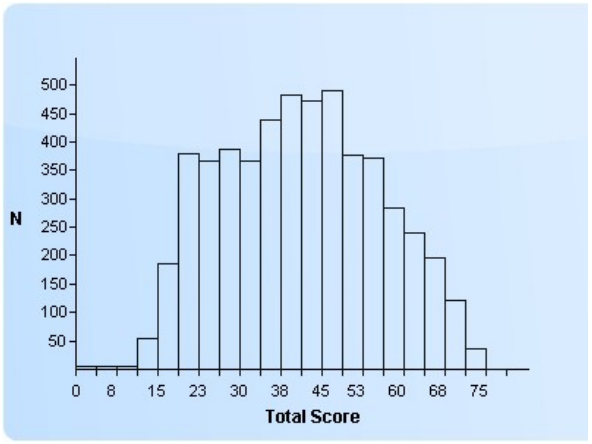
Scored Items	60
Unscored Items	20
Mean:	31.67
SD:	9.45
Min Score:	0
Max Score:	59
Mean P:	0.53
Mean R:	0.28
Alpha:	0.86
SEM:	3.55
S-B Odd-Even	0.86



Total score distribution (MR)

Test: Auto Service Tech (AS)

Scored Items	80
Unscored Items	20
Mean:	43.26
SD:	15.34
Min Score:	0
Max Score:	79
Mean P:	0.54
Mean R:	0.38
Alpha:	0.93
SEM:	3.94
S-B Odd-Even:	0.93



Total score distribution (AS)

Student Identity			Biographical (Age as of 2018-04-02)				Overall Credits (as of 2018-11-27)				Timeframe Credits (201304-201802)				
Student ID	Student Name	First Gen.?	Gender	Race/Ethn	Age	Age Category	# Attempted	# Passed	GPA	Degr. Aw.?	# Attempted	# Passed	GPA	Degr. Aw.?	
		?	M	White	31	B) 30-34	136	136	3.492	Y	124	124	3.508	Y	x
		N	M	White	29	C) 25-29	114	114	3.657	Y	72	72	3.888	Y	
		Y	M	White	62	B) 50+	122	110	3.477	Y	83	71	3.549	Y	
		?	M	Hispanic	24	B) 20-24	100	92	2.913	N	100	92	2.913	N	
		Y	M	Hispanic	22	B) 20-24	137	117	2.314	N	137	117	2.314	N	
		N	M	White	20	B) 20-24	90	90	3.255	Y	90	90	3.255	Y	
		N	M	White	36	C) 35-39	106	101	3.387	Y	60	60	3.461	Y	
		N	M	White	33	B) 30-34	100	100	3.170	Y	100	100	3.170	Y	
		N	M	White	22	B) 20-24	73	73	2.821	N	73	73	2.821	N	
		?	M	Black or African American	40	B) 40-44	176.5	112.5	2.463	N	101	73	2.739	N	
		N	M	Hispanic	22	B) 20-24	158	113	2.650	Y	150	113	2.650	Y	
		Y	M	White	22	B) 20-24	113	113	3.409	Y	94	94	3.453	Y	x
		N	M	White	24	B) 20-24	150	122	2.896	N	113	97	2.881	N	x
		Y	M	White	39	C) 35-39	169	106	2.263	N	60	40	2.454	N	
		Y	M	White	29	C) 25-29	91	91	3.963	Y	56	56	4.000	Y	
		Y	M	White	29	C) 25-29	112	92	3.287	N	36	36	4.000	N	
		N	M	White	25	C) 25-29	174	133	2.938	Y	91	77	3.152	Y	
		Y	M	White	32	B) 30-34	89	89	3.730	N	36	36	3.777	N	
		Y	M	White	23	B) 20-24	89	89	3.460	Y	89	89	3.460	Y	
		N	F	White	37	C) 35-39	256	158	2.191	Y	118	70	2.329	Y	
		Y	M	White	22	B) 20-24	105	105	3.885	Y	105	105	3.885	Y	
		?	M	White	25	C) 25-29	141	128	3.236	Y	77	77	3.616	Y	
		?	M	Unknown	25	C) 25-29	104	104	3.846	Y	68	68	3.941	Y	x
		N	M	White	24	B) 20-24	92	81	2.611	Y	33	33	3.166	Y	
		Y	M	Hispanic	37	C) 35-39	98	98	3.612	Y	98	98	3.612	Y	
		N	M	Multiracial (Non-Hispanic)	30	B) 30-34	112	105	3.155	N	73	73	3.780	N	
		Y	N	Hispanic	28	C) 25-29	227	142	2.689	Y	96	96	2.875	Y	
		?	M	White	26	C) 25-29	123	119	3.420	Y	123	119	3.420	Y	
		N	M	White	23	B) 20-24	119	111	2.859	Y	119	111	2.859	Y	x
		Y	M	Hispanic	30	B) 30-34	108	98	3.177	Y	60	60	3.200	Y	
		N	M	White	29	C) 25-29	103	99	3.461	Y	20	20	3.666	Y	
		N	M	White	28	C) 25-29	110	110	3.764	Y	85	85	3.740	Y	
		N	F	Unknown	29	C) 25-29	158	138	2.701	Y	117	97	2.548	Y	
		Y	M	Multiracial (Non-Hispanic)	50	B) 50+	119	115	3.713	N	88	84	3.797	N	
		N	M	Hispanic	24	B) 20-24	120	111	2.864	Y	90	90	3.000	Y	
		Y	M	Unknown	31	B) 30-34	114	84	2.881	N	29	24	2.206	N	
		Y	M	White	31	B) 30-34	134	94	2.500	Y	61	53	2.868	Y	
		N	F	White	26	C) 25-29	73	73	3.397	N	73	73	3.397	N	
		N	F	Hispanic	30	B) 30-34	131	82	3.463	N	69	69	3.521	N	
		Y	M	White	35	C) 35-39	134	129	3.782	Y	134	129	3.782	Y	
		?	M	Black or African American	36	C) 35-39	105	100	2.968	Y	90	89	3.098	Y	x
		Y	M	Hispanic	24	B) 20-24	123	96	2.687	Y	97	85	2.705	Y	
		?	M	Hispanic	23	B) 20-24	89	81	2.839	N	89	81	2.839	N	
		?	M	White	23	B) 20-24	80	77	3.025	N	73	73	3.205	N	
		N	M	White	36	C) 35-39	126	122	3.581	N	97	97	3.752	N	
		?	M	Black or African American	55	B) 50+	103	80	2.262	Y	103	80	2.262	Y	
		Y	M	Hispanic	25	C) 25-29	211	173	2.872	Y	123	102	3.000	Y	
		Y	M	White	32	B) 30-34	175	131	2.301	Y	154	114	2.267	Y	
		N	M	White	24	B) 20-24	105	105	2.742	Y	60	60	2.769	Y	
		Y	M	White	48	C) 45-49	184	129	2.652	Y	172	118	2.582	Y	
		N	M	Asian	30	B) 30-34	113	93	3.505	Y	89	81	3.529	Y	
		N	M	White	43	B) 40-44	77	77	3.792	Y	77	77	3.792	Y	
		?	F	Hispanic	24	B) 20-24	135	119	2.890	Y	135	119	2.890	Y	
		?	M	White	57	B) 50+	128	92	3.222	Y	82	62	3.099	Y	
		?	M	Hispanic	27	C) 25-29	77	77	3.616	Y	77	77	3.616	Y	x
		?	M	Unknown	23	B) 20-24	77	77	3.780	Y	77	77	3.780	Y	

?	M	Hispanic	21	B) 20-24	115	115	3.495	Y	115	115	3.495	Y	
?	M	White	45	C) 45-49	77	77	4.000	Y	77	77	4.000	Y	
?	M	White	22	B) 20-24	86	81	3.195	Y	86	81	3.195	Y	
?	M	Hispanic	25	C) 25-29	135	131	3.536	Y	67	67	3.610	Y	x
?	M	White	36	C) 35-39	89	85	4.000	Y	28	24	4.000	Y	
N	F	White	32	B) 30-34	102	102	3.957	Y	102	102	3.957	Y	
Y	M	Multiracial (Non-Hispanic)	21	B) 20-24	117	117	3.410	Y	117	117	3.410	Y	
N	M	Hispanic	48	C) 45-49	98	94	3.397	Y	98	94	3.397	Y	
N	M	White	37	C) 35-39	81	81	4.000	Y	12	12	4.000	Y	
?	M	Black or African American	37	C) 35-39	128	84	3.073	Y	95	83	3.173	Y	
N	N	White	22	B) 20-24	89	89	3.629	Y	89	89	3.629	Y	
?	M	Unknown	22	B) 20-24	98	87	3.021	Y	98	87	3.021	Y	
Y	M	White	36	C) 35-39	115	90	2.322	N	81	73	2.452	N	x
?	M	White	28	C) 25-29	111	111	3.540	Y	111	111	3.540	Y	
?	M	Hispanic	33	B) 30-34	141	131	3.076	Y	87	87	3.229	Y	
N	F	White	31	B) 30-34	86	78	3.487	N	36	28	3.285	N	
Y	M	White	35	C) 35-39	81	81	4.000	Y	44	44	4.000	Y	
Y	M	White	24	B) 20-24	168	168	3.731	Y	131	131	3.691	Y	
Y	M	Asian	26	C) 25-29	150	140	3.264	Y	120	120	3.391	Y	
Y	M	Hispanic	27	C) 25-29	81	81	3.397	Y	32	32	3.000	Y	
Y	M	White	28	C) 25-29	133	133	3.428	Y	20	20	4.000	Y	
?	M	Unknown	20	B) 20-24	77	77	3.636	N	77	77	3.636	N	
Y	M	Hispanic	35	C) 35-39	139	136	3.820	Y	101	98	3.877	Y	
N	M	White	21	B) 20-24	109	109	3.522	Y	109	109	3.522	Y	
Y	M	Hispanic	25	C) 25-29	162	149	3.292	Y	111	108	3.385	Y	x
Y	M	Black or African American	21	B) 20-24	81	81	3.395	Y	81	81	3.395	Y	
N	F	White	24	B) 20-24	150	113	2.554	Y	46	42	2.264	Y	
N	M	White	28	C) 25-29	81	77	3.636	N	73	73	3.780	N	
Y	M	White	40	B) 40-44	115	111	3.747	Y	32	32	4.000	Y	
Y	M	White	26	C) 25-29	195	174	3.305	Y	44	44	3.444	Y	
Y	M	White	24	B) 20-24	125	95	3.572	N	74	66	3.405	N	x
N	M	White	25	C) 25-29	80	80	3.187	N	24	24	3.166	N	
Y	M	Asian	29	C) 25-29	121	105	3.463	Y	113	97	3.550	Y	
N	M	White	30	B) 30-34	93	81	3.270	Y	93	81	3.270	Y	
N	F	White	39	C) 35-39	92	89	3.000	Y	77	77	3.116	Y	
?	F	White	28	C) 25-29	106	106	3.924	Y	86	86	3.906	Y	
Y	M	Hispanic	26	C) 25-29	89	89	3.730	Y	89	89	3.730	Y	
N	M	White	24	B) 20-24	110	102	2.887	Y	85	85	2.938	Y	
N	M	White	25	C) 25-29	100	100	3.720	N	64	64	3.812	N	
N	M	Asian	28	C) 25-29	92	87	2.839	Y	73	73	2.945	Y	
?	M	White	41	B) 40-44	128	116	3.474	N	56	52	3.307	N	
Y	M	White	64	B) 50+	81	81	3.726	Y	48	48	3.666	Y	x
?	M	White	23	B) 20-24	73	73	3.328	N	73	73	3.328	N	
Y	M	Multiracial (Non-Hispanic)	22	B) 20-24	84	84	3.571	Y	80	80	3.550	Y	
?	M	Unknown	32	B) 30-34	98	98	3.733	Y	98	98	3.733	Y	
?	M	Hispanic	22	B) 20-24	117	108	2.557	Y	117	108	2.557	Y	
Y	M	White	24	B) 20-24	88	88	3.175	Y	88	88	3.175	Y	
N	M	White	24	B) 20-24	129	100	2.140	Y	104	96	2.358	Y	
?	M	White	25	C) 25-29	73	69	2.671	N	73	69	2.671	N	
Y	M	Unknown	33	B) 30-34	143	128	3.221	N	48	48	3.208	N	
N	M	White	25	C) 25-29	111	103	2.815	Y	73	73	2.849	Y	
Y	M	White	30	B) 30-34	81	81	3.654	Y	81	81	3.654	Y	
Y	M	White	30	B) 30-34	93	89	3.910	Y	32	32	3.750	Y	
?	M	Unknown	36	C) 35-39	86	85	3.740	N	33	32	3.500	N	
?	M	Hispanic	22	B) 20-24	122	118	3.398	Y	119	115	3.382	Y	
Y	M	Hispanic	27	C) 25-29	126	102	2.727	Y	126	102	2.727	Y	
N	M	Multiracial (Non-Hispanic)	38	C) 35-39	135	111	2.909	Y	123	103	2.941	Y	
?	M	White	26	C) 25-29	101	89	2.903	N	16	12	3.000	N	

?	F	White	37	C) 35-39	213	145	3.286	Y	144	115	3.371	Y	
?	M	White	39	C) 35-39	98	90	3.644	Y	98	90	3.644	Y	
N	M	Asian	27	C) 25-29	168	146	2.720	Y	37	37	3.135	Y	
?	N	White	33	B) 30-34	105	105	3.961	Y	105	105	3.961	Y	
?	M	Asian	44	B) 40-44	161	129	3.286	Y	111	99	3.575	Y	
Y	M	Unknown	30	B) 30-34	101	86	2.777	N	24	24	2.833	N	x
N	M	White	24	B) 20-24	77	77	3.740	Y	77	77	3.740	Y	
N	M	White	30	B) 30-34	150	102	1.777	N	8	0	0.000	N	
?	M	Hispanic	21	B) 20-24	134	125	2.704	Y	126	121	2.760	Y	
?	M	Hispanic	24	B) 20-24	132	120	2.879	N	73	73	3.178	N	
Y	M	Hispanic	23	B) 20-24	90	86	3.188	Y	90	86	3.188	Y	
?	M	White	21	B) 20-24	117	97	2.928	Y	117	97	2.928	Y	
?	M	Hispanic	22	B) 20-24	85	84	3.082	Y	85	84	3.082	Y	
Y	M	White	27	C) 25-29	106	106	2.811	N	56	56	2.642	N	x
N	M	Multiracial (Non-Hispanic)	24	B) 20-24	183	183	3.590	Y	110	110	3.795	Y	
Y	M	Hispanic	24	B) 20-24	93	81	4.000	Y	68	68	4.000	Y	
Y	M	White	22	B) 20-24	130	122	2.920	Y	130	122	2.920	Y	
N	M	White	24	B) 20-24	143	120	3.193	Y	109	100	3.330	Y	
?	M	White	28	C) 25-29	77	77	3.561	Y	77	77	3.561	Y	
?	M	White	22	B) 20-24	140	112	2.612	Y	140	112	2.612	Y	
?	M	White	25	C) 25-29	77	77	3.896	Y	77	77	3.896	Y	
?	M	Hispanic	30	B) 30-34	140	124	3.250	Y	112	104	3.259	Y	
?	M	White	26	C) 25-29	100	77	3.220	N	75	52	2.846	N	
?	M	White	35	C) 35-39	144	140	2.862	N	36	36	3.444	N	
?	M	White	23	B) 20-24	84	83	2.602	N	73	73	2.712	N	
N	M	White	24	B) 20-24	226	206	3.071	Y	150	130	2.753	Y	x
Y	M	White	26	C) 25-29	102	102	3.265	Y	81	81	3.342	Y	
Y	M	White	22	B) 20-24	111	107	3.959	Y	93	93	3.952	Y	
N	M	White	24	B) 20-24	169	119	2.526	Y	134	100	2.508	Y	
?	N	White	26	C) 25-29	120	116	3.578	Y	120	116	3.578	Y	
N	M	White	39	C) 35-39	195	147	2.615	Y	69	69	2.737	Y	
Y	M	Unknown	25	C) 25-29	97	80	2.850	N	48	36	2.571	N	
?	M	Hispanic	29	C) 25-29	101	101	3.840	N	82	82	3.851	N	
Y	M	White	23	B) 20-24	123	114	3.200	Y	85	81	3.480	Y	
?	M	White	19	A) Under 20	91	89	3.191	N	91	89	3.191	N	
Y	M	Hispanic	29	C) 25-29	126	114	3.367	Y	114	102	3.361	Y	
Y	M	White	27	C) 25-29	165	161	2.956	N	12	12	4.000	N	
N	M	White	20	B) 20-24	77	77	3.896	Y	77	77	3.896	Y	
?	M	Unknown	30	B) 30-34	108	108	3.560	N	36	36	3.750	N	
Y	M	White	25	C) 25-29	96	84	3.011	N	73	73	3.342	N	
?	M	White	22	B) 20-24	109	109	2.935	Y	109	109	2.935	Y	
N	M	White	26	C) 25-29	73	73	3.561	N	24	24	3.166	N	
N	M	Hispanic	36	C) 35-39	86	82	3.444	Y	86	82	3.444	Y	
Y	M	White	64	B) 50+	159	93	2.490	N	126	68	2.271	N	x
?	M	Unknown	37	C) 35-39	81	81	4.000	Y	81	81	4.000	Y	
Y	M	Multiracial (Non-Hispanic)	27	C) 25-29	143	101	3.125	Y	40	30	3.040	Y	
N	M	White	33	B) 30-34	106	106	3.962	Y	106	106	3.962	Y	
Y	M	White	22	B) 20-24	140	128	2.356	Y	136	124	2.367	Y	
?	M	White	47	C) 45-49	123	107	3.333	Y	85	85	3.623	Y	
?	M	White	29	C) 25-29	128	123	3.226	Y	103	103	3.359	Y	
Y	M	Hispanic	23	B) 20-24	114	110	2.631	N	92	88	2.684	N	
Y	M	Black or African American	33	B) 30-34	110	87	2.589	N	106	83	2.571	N	
N	M	Native Hawaiian/Pacific Island	26	C) 25-29	89	89	4.000	Y	20	20	4.000	Y	
N	M	White	44	B) 40-44	185	142	2.801	N	36	36	3.555	N	
N	M	White	23	B) 20-24	114	94	2.717	N	114	94	2.717	N	
?	M	Non-Resident Alien	30	B) 30-34	166	166	3.662	Y	146	146	3.787	Y	
Y	F	Hispanic	24	B) 20-24	95	91	3.094	N	73	69	3.123	N	
N	F	White	34	B) 30-34	141	113	2.897	N	129	113	3.000	N	

?	M	White	21	B) 20-24	96	96	3.791	Y	96	96	3.791	Y		
Y	M	Asian	50	B) 50+	305	220	2.839	Y	73	73	3.452	Y		
?	M	White	23	B) 20-24	96	92	3.532	Y	96	92	3.532	Y		
?	M	Non-Resident Alien	32	B) 30-34	286	253	3.415	Y	124	124	4.000	Y		
N	M	White	39	C) 35-39	148	120	3.234	Y	96	89	3.285	Y		
N	M	White	26	C) 25-29	109	93	2.781	Y	101	89	2.771	Y		
Y	M	Unknown	29	C) 25-29	148	140	3.664	Y	81	81	3.821	Y		
?	M	White	40	B) 40-44	80	80	3.662	N	12	12	3.666	N		
Y	M	Hispanic	24	B) 20-24	85	78	2.670	N	77	77	2.727	N		
Y	M	Hispanic	36	C) 35-39	81	81	3.358	Y	81	81	3.358	Y	x	
?	M	White	30	B) 30-34	93	93	3.576	Y	56	56	3.500	Y	x	
?	M	Hispanic	27	C) 25-29	113	100	3.375	Y	73	69	3.219	Y		
Y	M	White	32	B) 30-34	201	179	2.576	Y	36	36	2.571	Y		
?	M	White	39	C) 35-39	101	93	2.858	N	89	85	2.740	N		
Y	F	White	23	B) 20-24	85	85	3.647	Y	85	85	3.647	Y		
?	M	White	68	B) 50+	235	202	3.630	Y	73	73	3.835	Y		
?	M	White	20	B) 20-24	78	78	3.623	Y	78	78	3.623	Y		
N	M	White	25	C) 25-29	85	85	3.105	Y	85	85	3.105	Y		
?	M	White	66	B) 50+	197	185	3.540	Y	81	81	3.654	Y		
?	M	Unknown	24	B) 20-24	77	77	3.792	Y	77	77	3.792	Y		
?	M	Asian	40	B) 40-44	103	83	3.209	Y	103	83	3.209	Y		

Notable Correlations:							
9 Yes	18 M	11 White, 1 Black or African	Median Age 31.83		Median GPA 3.179	11 Yes	
3 No		American, 4 Hispanic, 2 Unkown	Youngest Age 22		Lowest GPA 2.271	7 No	
6 Unknown			Oldest Age 64		Highest GPA 3.941		

Academic Year 2017/2018 TSA Breakdown

G1 Customer Service/Soft Skills – 93.6% Passing Score – 3 No Pass
Lowest Score 32% (1)
Highest Score 98% (2) Average Score 83.5%

A1 Engine Repair – 95.7% Passing Score – 2 No Pass
Lowest Score 40% (1)
Highest Score 98% (3) Average Score 84%

A2 Automatic Trans – 95.7% Passing Score - 2 No Pass
Lowest Score 38% (1)
Highest Score 95% (2) Average Score 79%

A3 Manual Drive Train – 87.2% Passing Score - 6 No Pass
Lowest Score 32% (1)
Highest Score 100% (1) Average Score 77%

A4 Suspension/Steering - 95.7% Passing Score - 2 No Pass
Lowest Score 48% (2)
Highest Score 98% (1) Average Score 78%

A5 Brakes – 93.6% Passing Score - 3 No Pass
Lowest Score 40% (1)
Highest Score 95% (4) Average Score 79.5%

A6 Electrical/Electronics - 95.7% Passing Score - 2 No Pass
Lowest Score 28% (1)
Highest Score 98% (3) Average Score 81.5%

A7 Heating and A/C – 100% Passing Score
Lowest Score 50% (1)
Highest Score 98% (1) Average Score 80%

A8 Engine Performance 95.7% Passing Score - 2 No Pass
Lowest Score 35% (1)
Highest Score 92% (1) Average Score 76%

424 Tests completed, 402 successfully = 95.8% completion rate.

G Number	CIP Code	Test Name	Test Type	Test Date	Test Result
???????	470604	A1********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A6********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A8********	TESTIRCL**	20121206	M
???????	470604	A1********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A8********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A1********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A8********	TESTIRCL**	20121206	M
???????	470604	A1********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A6********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A8********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A6********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A1********	TESTIRCL**	20130520	M
???????	470604	A2********	TESTIRCL**	20130520	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A8********	TESTIRCL**	20121206	M

???????	470604	A1********	TESTIRCL**	20121206	M
???????	470604	A2********	TESTIRCL**	20121206	M
???????	470604	A3********	TESTIRCL**	20121206	M
???????	470604	A4********	TESTIRCL**	20121206	M
???????	470604	A5********	TESTIRCL**	20121206	M
???????	470604	A6********	TESTIRCL**	20121206	M
???????	470604	A7********	TESTIRCL**	20121206	M
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Total Individual Students	**172**
Total Tests Completed	**1456**
Total "Met Benchmark"	**1420**
Total "Did Not Meet Benchmark"	**36**
Total % Passing Score	**97.50%**

Section 3 A

Program Review Data Profiles
Collegewide and Campus FTE and Headcount by Subject

Institutional Effectiveness Office, 2018-19 Program Profiles 5 Year Trend

Subject
Automotive Service Technology-AM

FTE Totals by Subject Area and Percent Difference from Previous Year

	Year									
	2013-14		2014-15		2015-16		2016-17		2017-18	
Campus	FTE	Percent Change	FTE	Percent Change	FTE	Percent Change	FTE	Percent Change	FTE	Percent Change
Collegewide	150.9	-0.3%	155.1	2.8%	153.1	-1.3%	141.2	-7.8%	144.8	2.5%
Sylvania	150.9	-0.3%	155.1	2.8%	153.1	-1.3%	141.2	-7.8%	144.8	2.5%

Headcount Totals by Subject Area and Percent Difference from Previous Year

	Year									
	2013-14		2014-15		2015-16		2016-17		2017-18	
Campus	Headcount	Percent Change	Headcount	Percent Change	Headcount	Percent Change	Headcount	Percent Change	Headcount	Percent Change
Collegewide	147.0	1.4%	149.0	1.4%	150.0	0.7%	130.0	-13.3%	137.0	5.4%
Sylvania	147.0	1.4%	149.0	1.4%	150.0	0.7%	130.0	-13.3%	137.0	5.4%

Notes:
FTE is "full time equivalency", and calculated with the following formula;
(# of contact hours x # of weeks) / 510 = FTE.
Percent Change is calculated from comparison to previous year totals.
Headcount for collegewide is an unduplicated number, a student is counted one time, regardless of the number of campuses they attend in one year.
Campus headcounts, get counted at each campus a student attended, therefore the sum of campus headcounts will not equal collegewide headcount.
Source reports; SWRPRFT, SWRPRHC.
Source name; FTE & Headcount by Subject.
Author; nbr.

Section 3 B

Percentage of Grades by Course and Counts

				Grades							
				A/B/C/P		D/F/NP		W/Other		Grand Total	
Subject	Course	Year	Campus	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..
Automotive Service Technolog..	AM100	2013-14	COLLEGEWIDE	58	95.1%	1	1.6%	2	3.3%	61	100.0%
			SYLVANIA	58	95.1%	1	1.6%	2	3.3%	61	100.0%
		2014-15	COLLEGEWIDE	53	88.3%	6	10.0%	1	1.7%	60	100.0%
			SYLVANIA	53	88.3%	6	10.0%	1	1.7%	60	100.0%
		2015-16	COLLEGEWIDE	52	92.9%	2	3.6%	2	3.6%	56	100.0%
			SYLVANIA	52	92.9%	2	3.6%	2	3.6%	56	100.0%
		2016-17	COLLEGEWIDE	48	90.6%	3	5.7%	2	3.8%	53	100.0%
			SYLVANIA	48	90.6%	3	5.7%	2	3.8%	53	100.0%
		2017-18	COLLEGEWIDE	49	87.5%	6	10.7%	1	1.8%	56	100.0%
			SYLVANIA	49	87.5%	6	10.7%	1	1.8%	56	100.0%
	AM111	2013-14	COLLEGEWIDE	44	93.6%	3	6.4%			47	100.0%
			SYLVANIA	44	93.6%	3	6.4%			47	100.0%
		2014-15	COLLEGEWIDE	39	92.9%	3	7.1%			42	100.0%
			SYLVANIA	39	92.9%	3	7.1%			42	100.0%
		2015-16	COLLEGEWIDE	44	97.8%	1	2.2%			45	100.0%
			SYLVANIA	44	97.8%	1	2.2%			45	100.0%
		2016-17	COLLEGEWIDE	47	97.9%	1	2.1%			48	100.0%
			SYLVANIA	47	97.9%	1	2.1%			48	100.0%
		2017-18	COLLEGEWIDE	41	100.0%					41	100.0%
			SYLVANIA	41	100.0%					41	100.0%
	AM121	2013-14	COLLEGEWIDE	40	88.9%	5	11.1%			45	100.0%
			SYLVANIA	40	88.9%	5	11.1%			45	100.0%
		2014-15	COLLEGEWIDE	51	92.7%	4	7.3%			55	100.0%
			SYLVANIA	51	92.7%	4	7.3%			55	100.0%
		2015-16	COLLEGEWIDE	39	84.8%	7	15.2%			46	100.0%
			SYLVANIA	39	84.8%	7	15.2%			46	100.0%
		2016-17	COLLEGEWIDE	43	89.6%	5	10.4%			48	100.0%
			SYLVANIA	43	89.6%	5	10.4%			48	100.0%
		2017-18	COLLEGEWIDE	40	97.6%			1	2.4%	41	100.0%
			SYLVANIA	40	97.6%			1	2.4%	41	100.0%
	AM131	2013-14	COLLEGEWIDE	44	91.7%	4	8.3%			48	100.0%
			SYLVANIA	44	91.7%	4	8.3%			48	100.0%
		2014-15	COLLEGEWIDE	51	96.2%	2	3.8%			53	100.0%
			SYLVANIA	51	96.2%	2	3.8%			53	100.0%
		2015-16	COLLEGEWIDE	44	95.7%	2	4.3%			46	100.0%
			SYLVANIA	44	95.7%	2	4.3%			46	100.0%
		2016-17	COLLEGEWIDE	46	97.9%	1	2.1%			47	100.0%
			SYLVANIA	46	97.9%	1	2.1%			47	100.0%
		2017-18	COLLEGEWIDE	40	100.0%					40	100.0%
			SYLVANIA	40	100.0%					40	100.0%
	AM132	2013-14	COLLEGEWIDE	39	92.9%	3	7.1%			42	100.0%
			SYLVANIA	39	92.9%	3	7.1%			42	100.0%
		2014-15	COLLEGEWIDE	48	94.1%	2	3.9%	1	2.0%	51	100.0%
			SYLVANIA	48	94.1%	2	3.9%	1	2.0%	51	100.0%
		2015-16	COLLEGEWIDE	40	93.0%	2	4.7%	1	2.3%	43	100.0%
			SYLVANIA	40	93.0%	2	4.7%	1	2.3%	43	100.0%
		2016-17	COLLEGEWIDE	42	100.0%					42	100.0%
			SYLVANIA	42	100.0%					42	100.0%
		2017-18	COLLEGEWIDE	40	95.2%	2	4.8%			42	100.0%
			SYLVANIA	40	95.2%	2	4.8%			42	100.0%
	AM141	2013-14	COLLEGEWIDE	48	98.0%			1	2.0%	49	100.0%
			SYLVANIA	48	98.0%			1	2.0%	49	100.0%
		2014-15	COLLEGEWIDE	49	96.1%	2	3.9%			51	100.0%
			SYLVANIA	49	96.1%	2	3.9%			51	100.0%
		2015-16	COLLEGEWIDE	44	86.3%	7	13.7%			51	100.0%
			SYLVANIA	44	86.3%	7	13.7%			51	100.0%
		2016-17	COLLEGEWIDE	48	100.0%					48	100.0%
			SYLVANIA	48	100.0%					48	100.0%

Percentage of Grades by Course and Counts

				Grades							
				A/B/C/P		D/F/NP		W/Other		Grand Total	
Subject	Course	Year	Campus	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..
Automotive Service Technolog..	AM141	2017-18	COLLEGEWIDE	46	97.9%	1	2.1%			47	100.0%
			SYLVANIA	46	97.9%	1	2.1%			47	100.0%
	AM142	2013-14	COLLEGEWIDE	50	96.2%	1	1.9%	1	1.9%	52	100.0%
			SYLVANIA	50	96.2%	1	1.9%	1	1.9%	52	100.0%
		2014-15	COLLEGEWIDE	45	90.0%	5	10.0%			50	100.0%
			SYLVANIA	45	90.0%	5	10.0%			50	100.0%
		2015-16	COLLEGEWIDE	43	93.5%	2	4.3%	1	2.2%	46	100.0%
			SYLVANIA	43	93.5%	2	4.3%	1	2.2%	46	100.0%
		2016-17	COLLEGEWIDE	48	94.1%	3	5.9%			51	100.0%
			SYLVANIA	48	94.1%	3	5.9%			51	100.0%
		2017-18	COLLEGEWIDE	45	95.7%	2	4.3%			47	100.0%
			SYLVANIA	45	95.7%	2	4.3%			47	100.0%
	AM151	2013-14	COLLEGEWIDE	49	96.1%	2	3.9%			51	100.0%
			SYLVANIA	49	96.1%	2	3.9%			51	100.0%
		2014-15	COLLEGEWIDE	51	98.1%	1	1.9%			52	100.0%
			SYLVANIA	51	98.1%	1	1.9%			52	100.0%
		2015-16	COLLEGEWIDE	50	98.0%	1	2.0%			51	100.0%
			SYLVANIA	50	98.0%	1	2.0%			51	100.0%
		2016-17	COLLEGEWIDE	44	100.0%					44	100.0%
			SYLVANIA	44	100.0%					44	100.0%
		2017-18	COLLEGEWIDE	44	91.7%	3	6.3%	1	2.1%	48	100.0%
			SYLVANIA	44	91.7%	3	6.3%	1	2.1%	48	100.0%
	AM161	2013-14	COLLEGEWIDE	57	98.3%	1	1.7%			58	100.0%
			SYLVANIA	57	98.3%	1	1.7%			58	100.0%
		2014-15	COLLEGEWIDE	53	100.0%					53	100.0%
			SYLVANIA	53	100.0%					53	100.0%
		2015-16	COLLEGEWIDE	53	98.1%	1	1.9%			54	100.0%
			SYLVANIA	53	98.1%	1	1.9%			54	100.0%
		2016-17	COLLEGEWIDE	49	90.7%	3	5.6%	2	3.7%	54	100.0%
			SYLVANIA	49	90.7%	3	5.6%	2	3.7%	54	100.0%
		2017-18	COLLEGEWIDE	48	98.0%	1	2.0%			49	100.0%
			SYLVANIA	48	98.0%	1	2.0%			49	100.0%
	AM162	2013-14	COLLEGEWIDE	58	98.3%	1	1.7%			59	100.0%
			SYLVANIA	58	98.3%	1	1.7%			59	100.0%
		2014-15	COLLEGEWIDE	53	100.0%					53	100.0%
			SYLVANIA	53	100.0%					53	100.0%
		2015-16	COLLEGEWIDE	52	100.0%					52	100.0%
			SYLVANIA	52	100.0%					52	100.0%
		2016-17	COLLEGEWIDE	48	90.6%	4	7.5%	1	1.9%	53	100.0%
			SYLVANIA	48	90.6%	4	7.5%	1	1.9%	53	100.0%
		2017-18	COLLEGEWIDE	46	93.9%	3	6.1%			49	100.0%
			SYLVANIA	46	93.9%	3	6.1%			49	100.0%
	AM163	2013-14	COLLEGEWIDE	40	87.0%	6	13.0%			46	100.0%
			SYLVANIA	40	87.0%	6	13.0%			46	100.0%
		2014-15	COLLEGEWIDE	41	85.4%	7	14.6%			48	100.0%
			SYLVANIA	41	85.4%	7	14.6%			48	100.0%
		2015-16	COLLEGEWIDE	45	93.8%	3	6.3%			48	100.0%
			SYLVANIA	45	93.8%	3	6.3%			48	100.0%
		2016-17	COLLEGEWIDE	46	93.9%	3	6.1%			49	100.0%
			SYLVANIA	46	93.9%	3	6.1%			49	100.0%
		2017-18	COLLEGEWIDE	38	90.5%	4	9.5%			42	100.0%
			SYLVANIA	38	90.5%	4	9.5%			42	100.0%
	AM171	2013-14	COLLEGEWIDE	37	92.5%	3	7.5%			40	100.0%
			SYLVANIA	37	92.5%	3	7.5%			40	100.0%
		2014-15	COLLEGEWIDE	42	97.7%	1	2.3%			43	100.0%
			SYLVANIA	42	97.7%	1	2.3%			43	100.0%
		2015-16	COLLEGEWIDE	43	91.5%	4	8.5%			47	100.0%
			SYLVANIA	43	91.5%	4	8.5%			47	100.0%

Percentage of Grades by Course and Counts

				Grades							
				A/B/C/P		D/F/NP		W/Other		Grand Total	
Subject	Course	Year	Campus	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..
Automotive Service Technolog..	AM171	2016-17	COLLEGEWIDE	43	89.6%	5	10.4%			48	100.0%
			SYLVANIA	43	89.6%	5	10.4%			48	100.0%
		2017-18	COLLEGEWIDE	41	95.3%	2	4.7%			43	100.0%
			SYLVANIA	41	95.3%	2	4.7%			43	100.0%
	AM181	2013-14	COLLEGEWIDE	38	92.7%	2	4.9%	1	2.4%	41	100.0%
			SYLVANIA	38	92.7%	2	4.9%	1	2.4%	41	100.0%
		2014-15	COLLEGEWIDE	47	95.9%	2	4.1%			49	100.0%
			SYLVANIA	47	95.9%	2	4.1%			49	100.0%
		2015-16	COLLEGEWIDE	43	97.7%	1	2.3%			44	100.0%
			SYLVANIA	43	97.7%	1	2.3%			44	100.0%
		2016-17	COLLEGEWIDE	47	97.9%	1	2.1%			48	100.0%
			SYLVANIA	47	97.9%	1	2.1%			48	100.0%
		2017-18	COLLEGEWIDE	45	95.7%	1	2.1%	1	2.1%	47	100.0%
			SYLVANIA	45	95.7%	1	2.1%	1	2.1%	47	100.0%
	AM182	2013-14	COLLEGEWIDE	37	88.1%	2	4.8%	3	7.1%	42	100.0%
			SYLVANIA	37	88.1%	2	4.8%	3	7.1%	42	100.0%
		2014-15	COLLEGEWIDE	40	78.4%	10	19.6%	1	2.0%	51	100.0%
			SYLVANIA	40	78.4%	10	19.6%	1	2.0%	51	100.0%
		2015-16	COLLEGEWIDE	48	96.0%	2	4.0%			50	100.0%
			SYLVANIA	48	96.0%	2	4.0%			50	100.0%
		2016-17	COLLEGEWIDE	44	93.6%	3	6.4%			47	100.0%
			SYLVANIA	44	93.6%	3	6.4%			47	100.0%
		2017-18	COLLEGEWIDE	47	97.9%	1	2.1%			48	100.0%
			SYLVANIA	47	97.9%	1	2.1%			48	100.0%
	AM183	2013-14	COLLEGEWIDE	34	87.2%	4	10.3%	1	2.6%	39	100.0%
			SYLVANIA	34	87.2%	4	10.3%	1	2.6%	39	100.0%
		2014-15	COLLEGEWIDE	46	92.0%	4	8.0%			50	100.0%
			SYLVANIA	46	92.0%	4	8.0%			50	100.0%
		2015-16	COLLEGEWIDE	45	95.7%	1	2.1%	1	2.1%	47	100.0%
			SYLVANIA	45	95.7%	1	2.1%	1	2.1%	47	100.0%
		2016-17	COLLEGEWIDE	47	100.0%					47	100.0%
			SYLVANIA	47	100.0%					47	100.0%
		2017-18	COLLEGEWIDE	42	95.5%	2	4.5%			44	100.0%
			SYLVANIA	42	95.5%	2	4.5%			44	100.0%
	AM199	2017-18	COLLEGEWIDE	25	96.2%			1	3.8%	26	100.0%
			SYLVANIA	25	96.2%			1	3.8%	26	100.0%
	AM199A	2017-18	COLLEGEWIDE	5	100.0%					5	100.0%
			SYLVANIA	5	100.0%					5	100.0%
	AM201	2013-14	COLLEGEWIDE	39	92.9%	2	4.8%	1	2.4%	42	100.0%
			SYLVANIA	39	92.9%	2	4.8%	1	2.4%	42	100.0%
		2014-15	COLLEGEWIDE	41	100.0%					41	100.0%
			SYLVANIA	41	100.0%					41	100.0%
		2015-16	COLLEGEWIDE	43	97.7%	1	2.3%			44	100.0%
			SYLVANIA	43	97.7%	1	2.3%			44	100.0%
		2016-17	COLLEGEWIDE	32	88.9%	4	11.1%			36	100.0%
			SYLVANIA	32	88.9%	4	11.1%			36	100.0%
		2017-18	COLLEGEWIDE	47	100.0%					47	100.0%
			SYLVANIA	47	100.0%					47	100.0%
	AM202	2013-14	COLLEGEWIDE	39	92.9%	3	7.1%			42	100.0%
			SYLVANIA	39	92.9%	3	7.1%			42	100.0%
		2014-15	COLLEGEWIDE	36	92.3%	2	5.1%	1	2.6%	39	100.0%
			SYLVANIA	36	92.3%	2	5.1%	1	2.6%	39	100.0%
		2015-16	COLLEGEWIDE	42	87.5%	6	12.5%			48	100.0%
			SYLVANIA	42	87.5%	6	12.5%			48	100.0%
		2016-17	COLLEGEWIDE	32	84.2%	6	15.8%			38	100.0%
			SYLVANIA	32	84.2%	6	15.8%			38	100.0%
		2017-18	COLLEGEWIDE	46	97.9%	1	2.1%			47	100.0%
			SYLVANIA	46	97.9%	1	2.1%			47	100.0%

Percentage of Grades by Course and Counts

				Grades					
				A/B/C/P		D/F/NP		W/Other		Grand Total	
Subject	Course	Year	Campus	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..
Automotive Service Technolog..	AM203	2013-14	COLLEGEWIDE	35	94.6%	2	5.4%			37	100.0%
			SYLVANIA	35	94.6%	2	5.4%			37	100.0%
		2014-15	COLLEGEWIDE	33	97.1%	1	2.9%			34	100.0%
			SYLVANIA	33	97.1%	1	2.9%			34	100.0%
		2015-16	COLLEGEWIDE	43	93.5%	2	4.3%	1	2.2%	46	100.0%
			SYLVANIA	43	93.5%	2	4.3%	1	2.2%	46	100.0%
		2016-17	COLLEGEWIDE	32	88.9%	4	11.1%			36	100.0%
			SYLVANIA	32	88.9%	4	11.1%			36	100.0%
		2017-18	COLLEGEWIDE	47	100.0%					47	100.0%
			SYLVANIA	47	100.0%					47	100.0%
	AM280A	2013-14	COLLEGEWIDE	5	25.0%			15	75.0%	20	100.0%
			SYLVANIA	5	25.0%			15	75.0%	20	100.0%
		2014-15	COLLEGEWIDE	10	50.0%			10	50.0%	20	100.0%
			SYLVANIA	10	50.0%			10	50.0%	20	100.0%
		2015-16	COLLEGEWIDE	11	44.0%			14	56.0%	25	100.0%
			SYLVANIA	11	44.0%			14	56.0%	25	100.0%
		2016-17	COLLEGEWIDE	2	33.3%			4	66.7%	6	100.0%
			SYLVANIA	2	33.3%			4	66.7%	6	100.0%
		2017-18	COLLEGEWIDE	1	50.0%			1	50.0%	2	100.0%
			SYLVANIA	1	50.0%			1	50.0%	2	100.0%

Program Review Data Profiles
Grade Count Distribution by Subject and Course

Institutional Effectiveness 2018-19 Program Review Profiles

Select Your Subject from the drop down menu
Automotive Service Technology-AM

Campus
All

Percentage of Grades by Course and Counts

				Grades							
				A/B/C/P		D/F/NP		W/Other		Grand Total	
Subject	Course	Year	Campus	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..	Enrl Count	% of Total ..
Automotive Service Technolog..	AM100	2013-14	COLLEGEWIDE	58	95.1%	1	1.6%	2	3.3%	61	100.0%
			SYLVANIA	58	95.1%	1	1.6%	2	3.3%	61	100.0%
		2014-15	COLLEGEWIDE	53	88.3%	6	10.0%	1	1.7%	60	100.0%
			SYLVANIA	53	88.3%	6	10.0%	1	1.7%	60	100.0%
		2015-16	COLLEGEWIDE	52	92.9%	2	3.6%	2	3.6%	56	100.0%
			SYLVANIA	52	92.9%	2	3.6%	2	3.6%	56	100.0%
		2016-17	COLLEGEWIDE	48	90.6%	3	5.7%	2	3.8%	53	100.0%
			SYLVANIA	48	90.6%	3	5.7%	2	3.8%	53	100.0%
		2017-18	COLLEGEWIDE	49	87.5%	6	10.7%	1	1.8%	56	100.0%
			SYLVANIA	49	87.5%	6	10.7%	1	1.8%	56	100.0%
	AM111	2013-14	COLLEGEWIDE	44	93.6%	3	6.4%			47	100.0%
			SYLVANIA	44	93.6%	3	6.4%			47	100.0%
		2014-15	COLLEGEWIDE	39	92.9%	3	7.1%			42	100.0%
			SYLVANIA	39	92.9%	3	7.1%			42	100.0%
		2015-16	COLLEGEWIDE	44	97.8%	1	2.2%			45	100.0%
			SYLVANIA	44	97.8%	1	2.2%			45	100.0%
		2016-17	COLLEGEWIDE	47	97.9%	1	2.1%			48	100.0%
			SYLVANIA	47	97.9%	1	2.1%			48	100.0%

Notes: Source reports; SWRPRAT. Source name Grades by Subject. Author; nbr.

Section 4 A

Program Review Data Profiles
Collegewide and Campus Demographics by Subject

Institutional Effectiveness 2018-19 Program Profiles 5 Year Trend

Subject
Automotive Service Technology-AM

Campus
Sylvania

	Year									
	2013-14		2014-15		2015-16		2016-17		2017-18	
Race/Ethnicity	Headcounts	% of Total	Headcounts	% of Total	Headcounts	% of Total	Headcounts	% of Total	Headcounts	% of Total
Asian	6.0	4.1%	6.0	4.0%	10.0	6.7%	7.0	5.4%	9.0	6.6%
Black	5.0	3.4%	6.0	4.0%	7.0	4.7%	4.0	3.1%	1.0	0.7%
Hispanic	20.0	13.6%	31.0	20.8%	33.0	22.0%	26.0	20.0%	25.0	18.2%
Multi	4.0	2.7%	6.0	4.0%	7.0	4.7%	5.0	3.8%	3.0	2.2%
Native					1.0	0.7%			1.0	0.7%
Pacific	2.0	1.4%					1.0	0.8%		
Unreported	13.0	8.8%	11.0	7.4%	6.0	4.0%	11.0	8.5%	17.0	12.4%
White	97.0	66.0%	89.0	59.7%	86.0	57.3%	76.0	58.5%	81.0	59.1%
Grand Total	147.0	100.0%	149.0	100.0%	150.0	100.0%	130.0	100.0%	137.0	100.0%

Notes:
Source reports; SWRPRRE. Source name; Race Ethnicity by Subject. Author; nbr.

Program Review Data Profiles
Collegewide and Campus Demographics by Subject

Institutional Effectiveness Office, 2018-19 Program Profiles 5 Year Trend.

Subject
Automotive Service Technology-AM

Campus
Sylvania

Demographics by Subject; Age

	2013-14		2014-15		2015-16		2016-17		2017-18	
Age Group	Headcount	% of Total Headcount	Headcount	% of Total Headcount	Headcount	% of Total Headcount	Headcount	% of Total Headcount	Headcount	% of Total Headcount
Under 20	23	15.6%	26	17.4%	25	16.7%	33	25.4%	38	27.7%
20-24	52	35.4%	52	34.9%	50	33.3%	52	40.0%	50	36.5%
25-49	65	44.2%	62	41.6%	67	44.7%	40	30.8%	45	32.8%
50+	7	4.8%	9	6.0%	8	5.3%	5	3.8%	4	2.9%
Grand Total	147	100.0%	149	100.0%	150	100.0%	130	100.0%	137	100.0%

Note:
Source reports; SWRPRAG.
Source name: Age by Subject.
Author; nbr.

Program Review Data Profiles
Collegewide and Campus Demographics by Subject

Institutional Effectiveness Office, 2018-19 Program Profiles 5 Year Trend.

Subject Automotive Service Technology-AM

Campus Sylvania

Demographics by Subject; Gender

	2013-14		2014-15		2015-16		2016-17		2017-18	
Gender	Headcounts	% of Total Headcounts	Headcounts	% of Total Headcounts	Headcounts	% of Total Headcounts	Headcounts	% of Total Headcounts	Headcounts	% of Total Headcounts
Female	11.0	7.5%	13.0	8.7%	14.0	9.3%	18.0	13.8%	10.0	7.3%
Male	136.0	92.5%	135.0	90.6%	135.0	90.0%	107.0	82.3%	123.0	89.8%
Unreported			1.0	0.7%	1.0	0.7%	5.0	3.8%	4.0	2.9%
Grand Total	**147.0**	**100.0%**	**149.0**	**100.0%**	**150.0**	**100.0%**	**130.0**	**100.0%**	**137.0**	**100.0%**

Note:
Source reports; SWRPRGE.
Source name; Gender by Subject
Author; nbr.

Section 7 A

Automotive Service Technology Advisory Board Memebers List 2019

Last	First	Position	Company
Bailey	Stedman	Perkins Advisor	PCC
Bassitt	Craig	Business Owner	Bassitt Auto Co
Blaney	Patrick	Service Manager	Peter's Autoworks
Carey	Mathew	Student Representative	AST Student
Cetina	Carlos Diaz	Student Representative	AST Student
Carlson	Tom	Technical Shop Manager	Subaru of Portland
Chapman	Barry J.	HR Business Partner	Trimet
Childers	Dan	Business Owner	Tigard SUV
Christopherson	Mike	Business Owner	Pro-Tek Automotive
Cruz	Rick	Instructional Support PCC	PCC Auto Instructional Support
Decker	Travis		Atomic Auto
Delange	Chris	Technician	Advanced Auto Systems
Dye	Allen	Instructional Support PCC	PCC Auto Instructional Support
Edwards	Dan	Les Schwab Headquarters	Store Recruiting Support
Ellenson	Margaret	Business Owner	Tyler's Automotive
Ellenson	Tyler	Business Owner	Tyler's Automotive
Grimes	Steve	Business Owner	Honest-1 Auto Care
Groom	Jay	Instructor	St. Helens High School
Harms	Catherine	Technician	Sherwood Auto Repair
Harter	Rob	Technician	Trimet
Heidler	Sarah	AWA	Hawthorne Auto Clinic
Heintz	Thomas	Field Service Engineer	General Motors
Helzer	Geoff	Business Owner	Green Drop Garage
Herdich	Mike	High School Instructor	St. Helens School Distric
Hess	Lewis	Owner	Peter's Autoworks
Holt	Pete	District Parts Serv. Mgr	Subaru
Houston	Tyler	Manufacturers Rep	Hunter Engineering
Jantze	Diane	Specialist Jobs & Internships	PCC
Jett	Jason	PCC Automotive Instructor	PCC Automotive Dept

Last	First	Position	Company
Jones	Russ	Scholarship Coord	PCC Automotive Dept
Joerres	Andy	Technical & Training Rep	Hunter Engineering
Kendall	Betty	Retired PCC Instructor	
King	John	Business Owner	Marsh Transmission
Kittinger	Kim	PCC Automotive Instructor	PCC Automotive Dept

Automotive Service Technology Advisory Board Memebers List 2019

Kuykendall	Jay	PCC Automotive Instructor	PCC Automotive Dept
LaPlante	Scott	Business Owner	Sherwood Auto
Macaulay	Leslie	Retired-PCC Instructor	PCC Automotive Instructor
MacDonald	James	HS Instructor	Tigard High School
McMillen	Mike	Manager	Green Drop Garage
May	Mitch	Western Regional Educational Manager	Subaru of America, Inc
McKee	Michael	Mfg's Rep	Hunter Engineering Co
Miller	Brad	Manager	Les Schwab Tire Center
Moilanen	Bryce	Service Mgr	McLoughlin Chevrolet
Newby	Devon	Student Representative	AST Graduate
Ouchida	Bart	Donation Coord	PCC Automotive Instructor
Pepka	Steve	Business Owner	Everett Street Autoworks
Pruner	Cliff	Business Owner	Les Schwab Tire Center
Purinton	Rich		
Ragan	Margaret	Board President	Tigard SUV & Auto Repair
Reeves	Bryan	Student Representative	AST Student
Roark	Jamie	Service Manager	Carr Chevrolet
Schrader	Will		Midas Auto Service
Steward	Joe	Store Manager	GCR Tires & Service
Sullivan	Patrick	Retired	Santa Rosa Jr. College
Weedman	Todd	Business Owner	Todd's Import Automotive
Wojahn	Josh		Dick's Auto Group
Woehl	Ethan		Tonkin Toyota
Young	Chris		Hunter Engineering Co
Zuniga	Daniel	Instructional Support PCC	PCC Auto Instructional Support

Automotive Service Technology
Advisory Board Meeting Minutes
March 8, 2018

Members Present:

- Katie Harms
- Leslie Macaulay
- Sarah Tillery
- Russ Jones
- Tyler Housten
- Margaret Ragan
- Thomas Heintz
- Mike McMillen
- Ethan Woehl
- Karin O'Connor
- Chris Delange

Welcome and call to order – Margaret Ragan
Introductions – Margaret Ragan

Old Business

- Minutes from November 21, 2017 meeting were reviewed and approved

New Business

- **Subaru U**
  - Will be offered once per year and is now an official class
  - A certificate will be offered for twelve credits and students can take the class now or after graduation

- **Hybrid Electric Course**
  - Jay Kuykendall is offering a hybrid electric course in the fall if he gets enough students
  - Students do have to be up to speed to electrical to take the new class

- **Skills USA**
  - High school and college students compete to showcase their skills on 4/20. Last year two students from St. Helens went to the nationals
  - We are sponsoring it again this year and it will take place here at PCC. Margaret is getting volunteers from industry and the National Guard and we are looking for volunteers to judge
  - We are looking for corporate donations for the BBQ luncheon as well as swag to give to the students. Sponsors write a check to the PCC Foundation and get a tax write off

- **Tigard High School Bond/Changes in High School CTE Programs**
  - A bond was passed that was earmarked for CTE programs. The changes made to the programs really impacted the school negatively.
  - We really need industry to voice concerns about the impact on the high school and to stay involved so they can offer input about how CTE money is spent
  - Beaverton is looking at investing in creating space on campus or getting an offsite space which is a very different situation
  - Margaret shared that high schools are looking at a number of teachers retiring and it is difficult to get new ones because they have to be from the industry, have an associates degree, get a teaching certificate, and take a major cut in pay
  - Local high school advisory boards also need industry representation

- Industry can share with the community that at times they cannot get work done because do not have enough qualified people

Other/Announcements

- Next Tuesday, March 13, is Portfolio Day. Students are put through mock interviews with industry reps and get feedback about their portfolios
- We have Factory Motor Parts coming to offer classes in AM Room 208. The first one, Refrigerant Recovery and Recycling, is on 4/4, and is geared toward industry techs. We will send out flyers to the board to provide the schedule

NATEF Review

- Our next meeting will be a review of the NATEF guidelines. NATEF reviews our program every five years and the board reviews us every two and a half.
- The focus of the board's review is to get us ready for the actual NATEF review so any issues should be brought to our attention. It also provides the board with the opportunity to see how we are doing and what we are teaching
- Board reviewed the inspection form and the process

Meeting adjourned at 8:20 am for shop evaluation and review

Automotive Service Technology
Advisory Board Meeting Minutes
May 22, 2018

NATEF 2 ½ YEAR REVIEW

AUTOMOTIVE SERVICE & REPAIR TECHNOLOGY
ADVISORY COMMITTEE AGENDA
December 4th, 2018

Welcome and call to order – *Margaret Ragan*

Introductions - *Margaret Ragan*

Old Business

- Approved minutes from winter, 2018.
- There are no spring minutes due to the NATEF 2 ½ year review

New Business

- *Sarah Tillery – Automotive department budget*
  - Governor "flat funded" budget for community colleges and we are trying to advocate for additional funding
  - We got one-time funds for our division to purchase equipment and provide support to our programs
  - Although Board doesn't approve budget we appreciate hearing from Board if there is a gap you are seeing in what we do/buy/provide

- *Russ Jones – Updated student tool sets*
  - Presented background of previous process for students to purchase tools and reasons for changing to what we will be doing
  - About 1 ½ years ago started requiring standard toolkit that students could purchase through Bookstore
  - As of winter 2019 will have new toolkit, primarily metric, for a lesser cost, which students can still purchase through Bookstore ($1950 vs. $2400) and scholarship recipients can use monies for tools
  - Russ reviewed what is in new toolkit and what is additionally required and suggested
  - Existing students may decide to purchase new toolkits for themselves
  - Multiple suggestions from Board to provide students with tool list for industry (what they will probably need in a job)
  - Lengthy discussion about options for providing students and graduates tools from industry members

- *Russ Jones – Seeks advisory input for prioritizing purchases of future equipment*
  - Russ provided copies of current department wish list. Each year the dean asks us what equipment we want/need
  - Discussion ensued regarding types of equipment needed in industry shops. We get students to the apprenticeship level and they will actually learn on the job
  - Former student, Katie Harms, told Board that she found exposure to the equipment was invaluable and what is helpful to the new employee is having employer teach the apprentice and make "mistakes" a learning experience

- *Russ Jones – Discussed upcoming Program Review scheduled for April 12th at 2:30pm*
    - PCC has a five-year program review which asks about demographics, graduation rates, changes in program, and forecasts what the program will need and what we will be doing in the next five years
    - Would like to have some graduates talk about what the program did for them and where they are once they've left
    - Also have members of Board attend to say how program is doing
    - Suggestion was made to keep reminding students that it benefits the program if, once they graduate, they keep us informed about whether or not they are still in industry and how much they earn
    - Russ explained to the members that PCC cannot track students and share information about them due to FERPA guidelines

Other/Announcements

- *Margaret - 4/27 in the morning, ASE round table. Goal is 100 people, get details from Margaret*
    - Trying to get participation from students, parents, industry

- Hunter training happening here for industry. $325 for level 1, taking place 12/17-19, and level 3, also $325, is 12/20-21
- Protek Automotive will have a booth in 'The Garage' of the Portland International Auto Show, Jan 24-27. Protek will be installing performance upgrades to two vehicles on-site
    - Last year, PCC AST students volunteered to help at this event and they are invited to participate again this year
    - **Contact Mike Christopherson, 503-621-8646**
- St. Helens has five-year Program of Study review coming up and they want to share curriculum from K12-PCC. Sharing curriculum can help align programs

Next Meeting

End of March, **tentatively 3/19**, after Skills USA, subject to change with notice

AUTOMOTIVE SERVICE TECHNOLOGY
ADVISORY COMMITTEE
March 19th, 2019

Jay Groom	Scott LaPlante	**Kim Kittinger**	**Carlos Diaz Cetina**
Steve Grimes	Brad Miller	**Russ Jones**	**Bryan Reeves**
Tom Heintz	Devon Newby	**Karin O'Connor**	**Jay Kuykendall**
Mike Herdrich	Margaret Ragan	Patrick Sullivan	**Sarah Tillery**
Tyler Houston	Joe Steward	Bryce Moilanen	

***Attendees in bold are from PCC**

Welcome – *Margaret Ragan*

Meeting was called to order at 7:45 a.m.

Introductions - *Margaret Ragan*

Old Business

- *Minutes from the fall meeting were reviewed and approved*

New Business

- *Discussion of the upcoming Program Review – Russ Jones*
    i. *Seeking volunteers to aid with Program Review*
    ii. *Scott LaPlante will talk as business owner and grad of program and will bring former student and current student to give view of industry ties and student views*
    iii. *Program review is five-year review for PCC. We use documentation to request needs and wants but never gotten administrative response to that*
    iv. *Included in the report are demographics, number of completers and number of students in program, enrollment in certain demographics, and what are we doing to increase if enrollment is low. A challenge with the numbers, demographics and women in program is that K-12 does not tend to encourage people to pursue CTE programs. Have about five schools in metro area that have CTE programs. More attention being paid to CTE on state level could improve this issue*
    v. *Program review and NATEF both want to know where student graduates work and what they are making but we cannot get that data from students. Once they leave PCC, no way to track them (PCC email goes dormant), school does not invest in gathering info, so all we can do is provide anecdotal data*
    vi. *We do exit interview with completers but often students are not at same location up to five years later. We ask for non-PCC email but we do not have the bandwidth to create surveys and track down students. Same situation brought up by Mike Herdrich so he uses anecdotal info as well.*
    vii. *Since NATEF asking for this data, Russ says it seems reasonable that somewhere it is being done*

viii. *School looking at potentially making program review annual event and Russ on that committee*

- *Update about status of our additional automotive courses - Jay Kuykendall*
  i. *PCC facing budget cuts due to state cuts but our budget looks like it will remain intact. Discussed what we have had donated for Subaru U, hybrid, and diesel classes. Because these are in addition to our standard curriculum, they may be cut. We are hoping to find some industry support if that happens.*
  ii. *It will be very helpful for industry to tell college that we should be offering these additional course and why. We also offer evening classes that are open to high school instructors and industry members*
  iii. *At the end of April five people looking at curriculum for service advisor program/class*

- *Russ Jones talked about our program having respect within PCC and the recognition that we need money and this year we actually got influx of funds. Trying to do create a new certificate (4 credit) program to help students and industry*

- *Russ thanked Jay for all his efforts, new ideas and energy*

- *Jay said he's also technical trainer so when we have industry classes, he coordinates it. If you want to leave your contact information, he will add you to the email list. We have dedicated room, AM 208, which has worked very well*

- *Per Margaret, there will be an industry-wide round table facilitated by ASE at World of*
- *Speed on Saturday, April 27. The goal is to bring together industry, educators, students, counselors and parents so ideas, opportunities can be discussed and groundwork set to develop an annual Roundtable event. Margaret will provide more information to those who are interested*

Skills USA

- *50 students competed and Margaret listed winners*
  i. *Vale will send one to nationals and Mt Hood CC will send a student as well*
  ii. *We do not have a chapter. It costs money (dues), adds another layer of what students have to do in school year and have to pay to compete at PCC and also at national*
  iii. *Margaret talked about doing fundraising soon, and is having a luncheon on 5/8*
  iv. *Mike Herdrich said there are some grants at HS level*
  v. *Margaret talked about how much easier it has become to have it here at PCC and Russ spoke about how much we like hosting it. An advantage is that the high school students get exposure to our students, industry members, and our program*

Hiring New Automotive Instructor – Russ Jones

- *We have a hiring committee and a really strong candidate pool. The search committee met yesterday and is moving forward. Process is somewhat arduous and lengthy. Hope to make offer late spring term and have person start in August. S/he will teach brakes and suspension*

Meeting adjourned and annual shop tour/inspection for NATEF tour started at 8:25 a.m.

Section 7 D

Wage Range 2018

for Automotive Service Technicians and Mechanics

Area	10th Percentile	25th Percentile	50th Percentile (median)	75th Percentile	90th Percentile	Average Hourly	Average Annual
Oregon	$13.21	$17.03	$22.12	$27.95	$32.59	$22.71	$47,238
Central Oregon	$13.91	$18.06	$22.71	$27.57	$30.18	$22.34	$46,480
Clackamas	$13.24	$17.21	$21.27	$24.66	$30.18	$21.56	$44,847
Columbia Basin	$12.32	$14.36	$20.25	$25.13	$29.19	$19.93	$41,465
Columbia Gorge	$13.54	$16.44	$20.73	$27.77	$30.45	$21.81	$45,367
Douglas	$14.37	$16.10	$18.06	$22.05	$28.52	$19.47	$40,492
East Cascades	$12.19	$15.20	$20.97	$27.16	$30.55	$21.28	$44,253
Eastern Oregon	$11.47	$14.56	$18.72	$23.79	$29.90	$19.55	$40,672
Eastern Six	$11.33	$15.53	$18.32	$22.60	$30.82	$19.28	$40,109
Lane	$12.40	$15.66	$19.44	$27.09	$30.58	$21.30	$44,296
Linn-Benton	$13.51	$17.08	$20.99	$26.07	$29.89	$21.59	$44,899
Mid-Valley	$12.40	$16.14	$20.06	$24.89	$29.29	$20.70	$43,041
Northwest Oregon	$12.16	$16.12	$20.85	$24.42	$29.30	$20.90	$43,469
Portland Tri-County	$15.64	$20.02	$24.56	$30.08	$36.31	$25.14	$52,302
Portland-Metro	$16.18	$20.73	$25.48	$30.83	$36.98	$25.95	$53,978
Rogue Valley	$12.09	$14.20	$17.81	$23.41	$30.02	$19.50	$40,561
South Coast	$16.01	$17.40	$19.76	$26.93	$30.35	$22.05	$45,853
Southwestern Oregon	$15.39	$16.74	$18.85	$25.01	$29.68	$20.83	$43,333

Information taken from www.qualityinfo.org on 04/02/2019

This information is in line with the anecdotal information we receive from students about their wages, with most students reporting between $17.00 -$19.00 per hour offered upon graduation, and substantial raises as students complete their ASE exams during their first 1-2 years in industry.

Automotive Service Technology Statistics

Forwarded job leads from the Jobs and Internships Office:

Term	Year 2017-2018	2016-2017	2015-2016
Fall	13	21	18
Winter	15	13	20
Spring	17	21	29
Summer	20	18	14

Students served on the jobs list:

Term	Year 2017-2018	2016-2017	2015-2016
Fall	180	139	117
Winter	188	158	119
Spring	202	169	121
Summer	198	168	120

***The statistics below are from the Qualityinfo.org page:**

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Data Sources and Limitations

Employment Outlook

Employment Outlook
for Automotive Service Technicians and Mechanics

Statewide Employment Analysis	Employment in this occupation in 2017 was much larger than most occupations across the state. The total number of job openings is projected to be much larger than most occupations in Oregon through 2027. This occupation is expected to grow at a much slower rate than the statewide average growth rate for all occupations through 2027. Reasonable employment opportunities exist.

Data Sources and Limitations

Area Employment Projections
for Automotive Service Technicians and Mechanics

Area	2017 Employment	2027 Employment	% Change	Annual Change Openings	Annual Replacement Openings	Total Annual Openings
Oregon	7,423	7,854	5.8%	43	702	745
Central Oregon	459	497	8.3%	4	44	48
Columbia Basin	109	121	11.0%	1	11	12
Columbia Gorge	72	70	-2.8%	0	6	6
Eastern Oregon	341	351	2.9%	1	32	33

Eastern Six	232	230	-0.9%	0	21	21
Lane	561	613	9.3%	5	53	58
Mid-Valley	951	1,020	7.3%	7	91	98
Northwest Oregon	535	567	6.0%	3	50	53
Portland Tri-County	3,557	3,786	6.4%	23	338	361
Rogue Valley	548	578	5.5%	3	52	55
Southwestern Oregon	281	303	7.8%	2	27	29

Replacement openings occur when workers permanently leave an occupation for reasons such as retirement.

Data Sources and Limitations

Section 7 E

5 Year PCC Degrees & Certificates Awarded by Subject

Year
All

Certificate/Degree
Multiple values

Major Description
Automotive Service Techno

5 Year Trends of Degrees & Certificates Awarded

			Year				
Major	Description	Degree	2013-14	2014-15	2015-16	2016-17	2017-18
AM	Automotive Service Techno	AAS	14	12	13	17	29
		ACERT2	13	23	35	24	47
Grand Total			27	35	48	41	76