Automotive Technology
Associate in Applied Science Degree
Mopar MCAP, GMASEP, Subaru U. & Global Automotive Technology and ASE Certified Technician AAS

Program Review
2016-2020

The Automotive programs remain in high-demand, and automotive technicians are classified as a High Priority Occupation. The automotive training programs are designed to meet the needs of a modern automotive service facility. The graduates of the Associate in Applied Science Degree (72 credits) can diagnose and repair complex vehicle problems including the ignition, fuel, and emission control systems, electronic system diagnosis and repair as well as electrical wiring to name a few. These are just a few of the many advanced systems covered in a comprehensive technical training program. Students also benefit from academic studies such as Math and Science, English, Speech Communication, and Business courses.

There are four degree options for students interested in the Automotive program. These options are the Automotive Technology Specialized Diploma (two semesters), the Automotive Service Consultant Certificate (three semesters), the Automotive Technology AAS Degree (four semesters), and the Automotive Technology AAS Degree for ASE Certified Technicians. The Automotive Technology AAS Degree allows the students to select the Mopar MCAP, GM ASEP, or the Global/Subaru University programs for degree completion.

The advantage for any student entering one of the manufacturer's programs is awarded approximately 80% of the manufacturer's training required of dealership technicians upon graduation. In addition to the AAS degree, the student is almost fully trained to the manufacturer's standards, increasing the value of the student to the dealership. The Global students graduate without this manufacturer's specific training but can work at any automotive dealer or repair facility. In cooperation with the Greater Lehigh Valley Automobile Dealers Association (GLVADA), customized programs were created to allow students to complete dealer factory training as they progress through NCC's program. This dealer factory training has led to increased sponsorship of our students at other dealerships throughout the Lehigh Valley.

NCC also offers a program for current ASE Certified Technicians to obtain their AAS degree. The online automotive degree is specifically designed for ASE-certified Master Technicians (A1-A8 +L1) wishing to obtain an Associate degree. A certified master technician can obtain up to 44 credits for their ASE certifications. The remaining credits can be obtained through online or in-person course offerings. The program is the same as our on-campus AAS program. Over the past five years, 27 students have enrolled in this online degree option.

Students participate in a 28-week cooperative work experience at a dealership or ASE certified repair facility where the student receives compensation during the training period. Students who successfully complete the program are assured full-time employment. The program had a 100% placement rate for 21 of the past 24 years for students who pursued a career in the Automotive field.

Students who complete the two-year automotive training program are certified to perform Pennsylvania Safety and Emission Inspections and are prepared to test for qualification as a Master Automotive Technician by the Institute of Automotive Service Excellence (ASE).

Students who matriculate into the program are enrolled primarily within the AAS degree. Career and Technical Education (CTE) students may receive up to nine (9) credits when entering their first semester at the college. The enrollment for the program has seen a decline in the audit years; with an estimated average of 100 students in the FA and 89 students in the SP semester. The table below is inclusive of the Associates degree in the online ASE program.

Automotive Technology AAS Degree (AUTD) Enrollment

Academic Year	Fall # of Students	Spring # of Students
2014-2015	120	102
2015-2016	109	106
2016-2017	95	86
2017-2018	79	77
2018-2019	94	78
2019-2020	98	86

The Automotive program cost per Full-Time Enrollment (FTE) for FY2020 was $10,453 and was ranked 46 of the 133 programs at NCC. The Automotive program is technology-dependent and keeping this technology current due to industry demands has resulted in increased capital expenditures. The program also has a significant requirement for consumable items used in the courses.

Northampton Community College

Automotive Technology

Associate in Applied Science Degree Mopar MCAP, GMASEP, Subaru U. & Global Automotive Technology and ASE Certified Technician AAS

Program Audit 2016-2020[1]

External Auditor:

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[1] This audit was originally due in Spring 2020.

AUTOMOTIVE PROGRAM
AUDIT REPORT
2016 - 2020

PROGRAM PURPOSE

The past five years have presented many opportunities and issues in the Automotive programs. New technologies such as hybrid and electric vehicles and increased electronic offerings available in many automotive models have required NCC to evolve our curriculum at a much faster pace. The COVID 19 pandemic affected enrollment numbers for 2019 through 2020 due to social distancing and hesitation and forced us to rethink how we offered instruction when on-ground attendance was not an option.

The Automotive programs remain a high-demand program, and automotive technicians are classified as a High Priority Occupation. The automotive training programs are designed to meet the needs of a modern automotive service facility. The graduates of the Associate in Applied Science Degree (72 credits) can diagnose and repair complex vehicle problems to include the ignition, fuel, and emission control systems. In addition, graduates can perform complex general and electronic system diagnosis and repair, including starting and charging systems, electrical wiring, accessories, and diagnosis and repairs to heating and air conditioning systems. These are just a few of the many advanced systems covered in a comprehensive technical training program. Students also benefit from academic studies such as Math and Science, English, Speech Communication, and Business courses.

Students have the option of three different tracks in the automotive degree program. They may choose from the General Motors ASEP program, the Mopar MCAP program, or the Global/Subaru University program. NCC also offers a program for current ASE Certified Technicians to obtain their AAS degree, a Certificate in Automotive Service Consultant, and an Automotive Technology Specialized Diploma. The advantage for any student entering one of the manufacturer's programs is awarding approximately 80% of the manufacturer's training required of dealership technicians upon graduation. In addition to the AAS, degree the student is almost fully trained to the manufacturer's standards, increasing the value of the student to the dealership. The Global students graduate without this manufacturer's specific training but can work at any automotive dealer or repair facility. In cooperation with the Greater Lehigh Valley Automobile Dealers Association (GLVADA), customized programs were created to allow students to complete dealer factory training as they progress through NCC's program. This dealer factory training has led to increased sponsorship of our students at other dealerships throughout the Lehigh Valley.

Students participate in a 28-week cooperative work experience at a dealership or ASE certified repair facility where the student receives compensation during the training period. Students who successfully complete the program are assured full-time employment. The program has a 100% placement rate for 21 of the past 24 years for students who pursue a career in the Automotive field.

Students who complete the two-year automotive training program are certified to perform Pennsylvania Safety and Emission Inspections and are prepared to test for qualification as a Master Automotive Technician by the Institute of Automotive Service Excellence (ASE).

CURRICULUM

There are four-degree options for students interested in the Automotive program. These options are the Automotive Technology Specialized Diploma (two semesters), the Automotive Service Consultant Certificate (three semesters), the Automotive Technology AAS Degree (four semesters), and the Automotive Technology AAS Degree for ASE Certified Technicians. The Automotive Technology AAS Degree allows the students to select the Mopar MCAP, GM ASEP, or the Global path to their degree. The online automotive degree is specifically designed for ASE-certified Master Technicians (A1-A8 +L1) wishing to obtain an Associate degree.

A certified master technician can obtain up to 44 credits for their ASE certifications. The remaining credits can be obtained through online or in-person course offerings. The program is the same as our on-campus AAS program. Over the past five years, 27 students have enrolled in this online degree option. Details on the coursework required for each of the options listed above are shown in Attachments 01 through 04.

The curriculum encompasses all eight areas of automotive repair per the ASE content. Course outlines and syllabi are updated as needed to reflect new course content as the technology changes. One course in the program titled AUTO224 Advanced Automotive Studies was created and specifically designed so as new technology is introduced, it can easily be included in the program instruction without creating new courses.

The fundamentals of electric and hybrid technology are covered in the second-year courses. The automotive program includes two courses, AUTO110 Introduction to Hybrid Vehicles and AUTO230 Hybrid Vehicles that are offered as electives. With the increase in electric and hybrid models being produced, these courses are constantly reviewed for content, and additional courses might have to be created to meet this technology demand. An additional course on hydrogen-powered vehicles might have to be created if demands increase for this technology.

DIVERSITY/EQUITY & INCLUSION

Women make up about half of the labor force. Women in the automotive industry, however, comprise only a quarter of the auto manufacturing workforce. They continue to represent an underutilized resource for automotive companies looking to gain a competitive advantage.

Environmental scans of the program courses are being conducted to ensure that Diversity, Equity, and Inclusion (DEI) is represented, discussed, and understood. This review will be accomplished by but not limited to

- Reviewing all PowerPoints and class materials and update as needed.
- AUTO203G - Research will be completed to include a diversity topic
- Include examples of DEI in lectures, for example, Women in Automotive Engineering
- Incorporating DEI YouTube videos into lessons.

As we progress through this review, additional items will be added as required.

PROGERAM OUTCOMES

Program outcomes emphasize theory, practical skills, and work experience. Upon successful completion of the Automotive Technology program, the graduate should be able to:

- Have the ability to demonstrate a positive attitude toward the efficacy of professionalism in the work in the workplace.
- Diagnose and repair mechanical systems of automotive engines; automatic transmissions and transaxles; manual drive trains and axles; suspension and steering systems; braking systems; electrical and electronic systems; heating and air conditioning systems; and engine performance systems.
- Exhibit logical thinking throughout essential areas of automotive diagnostics, using published technical information to repair a vehicle while meeting manufacturer's specifications.
- Demonstrate competence in the use of general and highly specialized tools and equipment.
- Demonstrate the ability to communicate effectively on both technical and lay levels.

STUDENT GRADUATION STATISTICS

Faculty have a great rapport with their students and try to keep in touch with them after graduation. Tracking actual placement data is challenging as we rely on the students to provide information about their current employment status. Most students find employment in the Lehigh Valley area after graduating.

Students who graduate from the program and decide to enter the workforce have no problem securing full-time employment. 100% of the students who responded to the surveys are either employed in the Automotive field or continuing their education.

Upon graduation, opportunities are excellent for automotive service technicians with diagnostic, problem-solving skills, and knowledge of electronics. Automotive service technicians must continually adapt to changing technology and repair techniques as vehicle components and systems become increasingly sophisticated. Most students are employed at various dealerships and independent repair facilities in the Greater Lehigh Valley area, the Poconos, and Warren County, New Jersey. Program Learning Outcomes and Gen Ed Outcomes and how they relate to the individual course curriculum can be found in Attachment 05.

Automotive Technology AAS Degree (AUTD) Graduation

	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
# Of Graduates	31	34	15	24	23
Employed	27	29	13	14	*
Job Hunting	0	0	0	0	0
Continuing Ed	1	1	1	1	*
Other	3	4	2	9	*
Employed/Grad	87%	85%	87%	58%	*

Note: AAS degrees combined in chart

* Data is not available yet

EMPLOYER SATISFACTION

Employers are required to complete a student access form upon the completion of the three required practicums. Based on the data received employers are very satisfied with the quality and caliber of our student. Fifty different companies have hired NCC graduates over the past five years. Most hiring multiple students. These graduates were hired to fill 14 different position titles (refer to Attachment 06 for specific details). More companies are looking for NCC graduating students to employ than we have students in the program.

There has been an increased interest for Automotive graduates to be employed in other areas outside of the Automotive field. Manufacturing companies have found that these students possess a solid mechanical aptitude, an understanding of mechanical systems, and troubleshooting and repairing skills.

ENROLLMENT

The Global Program continues to see an increase in the number of students enrolled. While we have been unable to get the suggested number of new students sponsored in both the MCAP, GMASEP, and Subaru programs. With the tacit approval of the manufacturers, we have used the open seats to allow more Global students into our program. It is important to highlight the Global program also serves a large section of dealers not specific to our program, such as Nissan, Ford, Toyota, Honda, for example

The total enrollment trend during the five-year audit period is shown below.

Automotive Technology AAS Degree (AUTD) Enrollment

Academic Year	Fall # of Students	Spring # of Students
2014-2015	120	102
2015-2016	109	106
2016-2017	95	86
2017-2018	79	77
2018-2019	94	78
2019-2020	98	86

Note: Table above includes the AAS, ASE enrollment

Most students choose the AAS degree program over the Specialized Training Diploma. Students are advised when registering of the advantages of both majors. One out of every four students is a part-time student in the program. Most part-time students focus on taking the required Automotive courses each semester, taking the other required courses as their schedule permits. Over the past five years, 4% of our graduating students decide to continue their education at a four-year college. The Dealership Student Technician placement opportunities are at an all-time high and afford plenty of opportunity for our students.

Program faculty and admissions are currently working on various methods to increase potential student interest in the Automotive programs. These items would include increased activity to visit sponsoring schools, attend open houses, connect with middle-grade school students, and expand the current marketing tools available.

Extensive recruitment by the automotive instructors at car shows, racetracks, and other related venues, High School visits, internet searches, ZOOM presentations, and word of mouth has led to a steady enrollment for four of the five years. Despite the ongoing interest in the program in general, it remains an ongoing challenge to enroll students in the manufacturer's specific programs for reasons that aren't fully understood. With the restrictions due to COVID-19, recruitment efforts during 2020 were affected. Open houses and class visits at the local Career & Technical Education and High Schools and tours of the Automotive center were either postponed or held virtually. Auto shows and other events that the Program faculty usually attend were canceled.

We currently have articulation agreements with eleven schools which are listed below.

Berks Career & Technical Center East
Bethlehem Area Vo-Tech
CTC of Lackawanna County
Cumberland Perry Area VTS
Delaware County Tech Schools
Hunterdon County Polytech
Lehigh Career & Technical Institute
Middle Bucks Area Vo-Tech
Monroe Career & Technology Institute
Upper Bucks County Vo-Tech
Western Montgomery Career & Technology Center

The number of signed agreements has dropped due to five schools no longer having NATEF certification. One school's program was suspended, and five agreements were issued and not returned. The five that were not returned are being updated and reissued to additional school personnel for review and approval. We are in the process of signing an agreement with Milton Hershey School.

These agreements have been very beneficial in attracting out-of-county students into our program. Upon the recommendation of the student’s instructor, and a “B” or better grade, they may receive up to 11 credits for the first semester. These credits represent a significant saving for the students, particularly if they attend from out of county or state.

PROGRAM COST

Cost reductions for operational and capital spending are constantly reviewed within the program and are closely monitored. The Automotive program is considered a High Priority Occupation (HPO) by the State of PA. This designation has allowed NCC to request capital funding through the Carl D. Perkins Career and Technical Education Improvement Act of 2006 funding (Perkins). This funding allows NCC to purchase and implement new technology and equipment into the program to ensure the students are instructed on the same equipment used in the automotive industry. The use of this technology appeals to the students and is part of why they enroll in the NCC automotive programs.

The automotive program has historically averaged high in the ranking for expenses compared to the other programs at the college. The Automotive program cost per Full-Time Enrollment (FTE) for FY2020 was $10,453 and was ranked 46 of the 133 programs at NCC. The Automotive program is technology-dependent and keeping this technology current due to industry demands has resulted in increased capital expenditures. The program also has a significant requirement for consumable items used in the courses.

COVID-19 social distancing restrictions placed on the college for the Fall 2020 semester resulted in the number of students allowed in a classroom being reduced almost by half. The same issue will affect a few future semesters as well. Additional supplies and tools had to be purchased as well to ensure student safety. These issues have affected the Fall 2020 cost per FTE numbers.

The Automotive Quasi Endowment fund was established over 23 years ago to support automotive student scholarships. Every year at least two students are awarded scholarships to the program. In addition to the NCC scholarships in cooperation with GLVADA, three annual scholarships are awarded by GLVADA to students that attend the NCC Automotive program. Scholarship opportunities are also available through PAA and various aftermarket retailer programs.

COMMUNITY EDUCATION

While not a part of this audit, it is worth mentioning the non-credit net revenue generated by various Automotive classes over the last five years is $418,220. These non-credit classes have served over 2936 students since January 2016. This number will be considerably lower in the future due to the RV courses being discontinued and the PA Emissions Recertification test being offered online through PENNDOT.

Community Education is an area for potential growth, both for enrollment and financial opportunities. While the Program Director and faculty have made current pathways and opportunities for students, a stronger connection needs to be had between the college units. New courses can be created and offered as demand requires.

PROGRAM FACULTY

The automotive staffing includes three full-time instructors, Richard Meyers, Assistant Professor, Kevin Casey, Associate Professor, and Victor Bast, Assistant Professor. It also includes four adjunct instructors, a part-time Lab Assistant position that is Perkins funded, and a shared secretary.

The instructors are continually engaged in training classes provided by Stellantis (Mopar/FCA) and General Motors. Each of the full-time instructors has achieved Master level certifications in their areas of expertise. All three instructors maintain their dealership training requirements by attending or completing all training classes required by General Motors and Stellantis (Mopar/FCA). This training requires considerable time on their part. Lastly, all the faculty are ASE master certified, and each holds the L1 Advanced Engine Performance certification. Two of the instructors have advanced hybrid training.

With the retirement of the previous Program Director, the current reporting structure was reviewed and reorganized to align programs and students with additional skills and qualifications. The Automotive program now reports to the Director Automotive, Industry and Manufacturing. A Program Manager will be hired to manage the program and will report to the director.

The Program Manager will assist the current staff by supporting curriculum updates, student enrollment, student retention, program improvements, and actively teaching up to nine credits a semester (refer to Attachment 07 for the Program Manager Job Description).

EARNINGS

The average median hourly earnings of automotive service technicians and mechanics, including commissions, was $21.18 in 2020. The lowest 10 percent earned less than $12.40, and the highest 10 percent earned more than $34.59. Median per hour earnings in the industries employing the most significant numbers of service technicians in 2020 were as follows:

Local government	$26.65
Automobile dealers	$23.92
Gasoline stations	$20.74
Automotive repair and maintenance	$21.02
Automotive parts, accessories, and tire stores	$20.04

The average hourly wages for our graduates have ranged from $14.25 to $17.00 for the last five years. While this is below the industry published hourly rates, the industry rates are based on pay based on productivity. Recent graduates typically require a year to two years to reach their peak productivity. If we were to survey the same graduates later after graduation, we would find that their salaries would fall closer to the norms. Moreover, any experienced technicians employed by automobile dealers and independent repair shops receive a commission related to the labor cost charged to the customer. Under this method, weekly earnings depend on the amount of work completed. Employers frequently guarantee commissioned (flat-rate) mechanics and technicians a minimum weekly salary.

RECOMMENDATIONS AND RESOLUTIONS FROM THE 2010 TO 2015 AUDIT

These audit points, whenever possible are connected to the most current institutional strategic plan, key performance indicators and metrics.

1. The greatest need is for additional lab space. The current facility is inadequate for the number of students enrolled. The industry recommends no more than two students per car when doing on-car labs. This was also mentioned in the last audit. *Response: An effort was made to organize the various labs and classrooms within the Automotive Technology Center. An external storage container has been purchased to store items and move them into the labs as needed per semester.* *While it is the wish of the program to move to larger facilities, this needs to be placed within the context of the larger institutional facilities planning. Additionally, the program continues to work with the industry partners to find novel ways to create additional space.*	Satisfied Ongoing
2. A lab technician is needed to assist the instructors and to control inventory. If you have a full class of, say twenty students, all doing a brakes lab, it's nearly impossible for one instructor to monitor all students. This could be a safety issue. Camden, Brookdale, and Harrisburg Community College's all have automotive lab technicians for their programs. *Response: A lab technician was hired to assist all the faculty since the last audit.*	Satisfied
3. Have separate informational brochures for GM, Chrysler, and Global programs. Contents could have: Director's contact information, a list of courses to be taken, the total cost of the program and the criteria needed to be admitted into the programs, etc. *Response: There have been updates made to the current literature. New marketing material has been created to address nuances of each program.*	Satisfied
4. Have the Automotive Director and secretary's contact information placed in the Automotive section of the college website. *Response: Generic information rather than name specific information has been included on various web pages and literature.*	Satisfied
5. Share the academic transcript of students with their employers. This could be done when instructors are doing a practicum visit. A release form would have to be created for the students to sign. This would be for the employer's eyes only (service Manager). This would give the employer an idea of how his/her employee is progressing academically. *Response:* The *students' transcripts are available at the time of their graduation. It is at their discretion when and with whom to share this information. This information is not made available to practicum employees as the students are considered part-time.*	Satisfied
6. Increase assessments of final exams. A hands-on assessment is the best way to gauge a student's progress. However, this is a lot of work for the instructor, and without a lab technician, very difficult to achieve. This would also help the college to meet Middles States criteria. *Response:* This is *currently being done with the assistance of the hired lab technician.*	Satisfied

7. Consult with the college attorney to see if the students need to sign a release form stating something to the affect that the college is not responsible for them when the student is doing a practicum at his/her place of employment. *Response: Internal communication with Comptroller confirmed status of these types of experiential options. The students are considered employees of the company they are completing their practicum. The employer is responsible for carrying all required insurances for the student.*	Satisfied

FUTURE AUTOMOTIVE INITIATIVES

As of FA2021, the Automotive programs were consolidated under the Industry and Manufacturing Area of Study. Ken Nasatka, Director Automotive, Industry & Manufacturing, manages the personnel (both administrative and faculty), budgets, reviews, program direction, day-to-day concerns. There are collaborative opportunities and skillsets that can be and should be taught to students in each area, confirmed by industry partners as needed by the new employee in transportation. Secondly, the move from solely an Automotive program to that of Transportation will allow for programmatic expansion.

Restructuring of the Program has created a role for a new Program Manager to oversee the program. Responsibilities will include but are not limited to adjunct hiring, assist in managing the Auto program directives (Mopar, Chevy, Subaru), teach courses as required, and help fill in any gaps of automotive knowledge and technology. Having this position is in line with how other programs are managed. The creation of a Program Manager position was discussed with our ASE Education Foundation Manager, Ken Benson, as part of a programmatic inspection. (Discussion via Zoom meeting; December 2, 2020, at 1:00 PM). Ken was in support of such a structure and position to help move the program forward. In his professional capacity of ASE programs, he was of the opinion there was more merit in having a Program Manager in the with the current incorporation of Automotive as part of the Industrial and Advanced Technology programs.

The future direction of Automotive Technology (Update 2.0) will be reviewed and addressed by the faculty, staff, and advisory members in the coming year. Specifically, the following items are under review and consideration for the program

1. Some questions we need to answer with industry help will determine what is needed to move the Automotive Program to the next level. How do we expand the program? What does the industry need, and what can NCC support? How will the Internet of Things (IoT) and Industry 4.0 affect the Automotive Industry? What additional manufacturer programs should NCC pursue, if any? What additional fuel technologies such as hydrogen powered technology (GM, Volvo, Toyota, Kenworth, and Daimler Trucks) should be included in the curriculum? (Owners: Program Director, Faculty)

2. The new management needs to strengthen NCC's relationship with the Greater Lehigh Valley Auto Deals Association (GLVADA). GLVADA's role in assisting with moving the Automotive program forward will be an integral contributor to its success.

    - What role can the alumni play in the expansion of the program? (Owners: VPIA, Dean, Program Director, Faculty)

3. The Articulation agreements will be reviewed and updated as necessary. The PA Students Occupationally and Academically Ready (SOAR) website will be reviewed and updated as required. (Owners: Program Director/ Associate Dean)
    - We also need to review how NCC can expand incoming articulation from Career and Technical Educational Institutions, High Schools, private schools, and Cyber schools. Four-year articulation with various colleges will be reviewed and updated as new opportunities arise as well.

4. Review if a Hybrid Automotive Technology SD program needs to be created. The student would be required to complete the current auto coursework before attempting. This program would be a secondary degree the student could obtain.
    - The SD would require an additional 25 credits to complete. (Owners: Faculty)

5. The current Automotive Technology AAS degree requires 72 credits to complete. Students could consider taking additional coursework that while not meeting automotive program requirements, would give the student an additional skill set upon graduation. Some of these courses might include Introduction to Welding Processes (WELD105), Advanced Plate Welding Processes (WELD123), Introduction to Sustainable Energy (ELTC130), and obtaining a CDL Class B license. These courses lay the foundation for students to have options beyond the technician profession. (Owners: Program Director, Program Manager, Faculty)

6. Future Programs (funding, demand, and space evaluation required) that could be considered in the future might include Medium/Heavy Duty Truck (Diesel Repair), Collision Repair & Refinish (Auto body), additional Auto Manufacturer programs (Ford, Toyota, Nissan, Tesla)

7. Have a dedicated recruiter with explicit knowledge of technical/industrial programs would be advantageous to our manufacturers programs and therefore our dealer base as well. (Request/submission through the Perkins requests/submissions)
   (Owners: VPAA, Dean, Program Director, Faculty, Grants Office)
    - Additional focus on expanding opportunities for student to explore, choose, and follow career and technical education (CTE) programs of study and career pathways to earn meaningful credentials.
    - Similarly, rebrand the program to include more than a technician. What other opportunities exist for students in the AUTO industry, such as original equipment manufacturers (OEMs), after market auto parts supply, suppliers, dealers, and captive finance companies.

8. Community Education is an area for potential growth, both for enrollment and financial opportunities. While the Program Director and faculty have made small and viable pathways and opportunities for students, a stronger connection needs to be had between the college units. New courses can be created and offered as demand requires. (Owners: VPAA, Dean, Program Director, Faculty)

CONCLUSIONS & RECOMMENDATIONS (See: External Evaluator Report)

It is the recommendation of the Dean, Director, and faculty of the program that the Automotive program continue with the clear directive to continue to research how best to increase enrollment and viable opportunities for students.

Recommendations from the External Evaluator is attached.

Ken Nasatka **Director, Automotive, Industrial & Manufacturing**	**Denise François-Seeney, Ph.D.** **Dean, School of Business & Industry**	**Rick Meyers** **Assistant Professor, Automotive**

Attachments

1. Carolyn Cramsey, Service Director, Ciocca Subaru, External Auditor's Report
2. Automotive Tech Specialized Diploma Program Map (20-21 Catalog)
3. Automotive Service Consultant Certificate Program Map (20-21 Catalog)
4. Automotive Tech AAS Program Map (20-21 Catalog)
5. Automotive Tech Degree for ASE Certified Technicians AAS Program Map
    a. (20-21 Catalog)
6. Automotive PLO and Curriculum Matrix
7. Student Placement – Companies and Positions
8. Program Manager, Automotive Technology Job Description

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October 8, 2021

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As the Service Director of 12 years for Ciocca Subaru located in Allentown Pennsylvania, I was invited to complete this year's external audit of the Automotive Technology AAS Mopar MCAP, GMASEP, Subaru U. and Global Automotive Technology, and ASE Certified Technician AAS Degree Programs at Northampton Community College. The external audit was completed on October 06, 2021 in association with Ken Nasatka, Program Director and Richard Meyers, Assistant Professor. The following materials were supplied by the college as part of the audit review:

- 2020-2021 College Course Catalog Program Maps for each curriculum
- Curriculum and course credit information
- List of companies who hire NCC graduates
- Industry and Manufacturing student/parent handout
- Industry and Manufacturing industry handout
- Diversity and Inclusion program
- Program outcomes, along with graduation and job placement statistics
- Graduate earning potentials as reported by the Bureau of Labor Statistics
- Program costs and scholarship/funding availability
- Instructor credentials
- Facility tour of equipment and tools
- Instructor interviews
- Previous external audit reports 2010 and 2015

The Northampton Community College Automotive Technology curriculum satisfies the current needs of the industry. The program offers several specialized areas of focus in the MCAP and GMASEP while also encompassing a more generalized automotive program through the Subaru U. and Global Automotive Technology programs. The addition of the ASE degree online program grants the college ability to offer its on campus AAS program virtually. All programs now ensure the representation of diversity/equity and inclusion throughout the curriculum to more accurately represent the current culture of the industry. The college recently purchased several new training tools and equipment and has budgeted several more with monies received through Perkins funding. This will help to ensure that the facility stays current with new technology and industry training. It is essential for the college to continue to focus on new technology training and advancements in order to remain relevant with the industry.

Due to the current pandemic, the college has been unable to access local high schools for recruitment purposes which has led to lower enrollment numbers for the current year. They have however successfully maintained enrollment numbers over the last several years. As well the number of articulation agreements has dropped due to five schools no longer having NATEF

Certification, one school's program being suspended, and five agreements not returned. While this creates another burden to encouraging enrollment the school is making ample efforts to create new agreements. Given the program costs, high level of training, rate of graduation, and 100% job placement, the program proves to fulfil the needs of its incoming students.

The curriculum is staffed by three full time instructors Richard Meyers, Assistant Professor, Kevin Casey, Associate Professor, and Victor Bast, Assistant Professor. All the instructors are Master level certified in their area of expertise, master ASE certified and have completed their L1 Advanced Engine Performance certification. Additionally, two instructors have completed their advanced hybrid training. The skills and training of the faculty meet the needs required to properly train the given curriculum.

Strengths:

1. The program has made substantial improvements offering an even more expansive curriculum with the Subaru U. and Global Automotive Technology, and ASE Certified Technician AAS.
2. The program has made cultural improvements adding a diversity and inclusion element.
3. The program costs are reasonable especially considering the 100% job placement post-graduation.
4. The faculty are well versed in the required training areas and are continually working to advance their certifications.
5. There have been vast improvements made in the tools and technology available to the program and training facility.

Recommendations:

1. Hire a Program Manager
    - The addition of the role will assist the current staff by allowing them to focus their work in their areas of expertise. The Program Manager will then be able to oversee and maintain the curriculum, focus on increasing enrollment, and ensure compliance with technology advancements.
2. Hire a Lab Tech
    - The current ratio of teachers to students in a class does not permit the instructor to provide adequate hands-on training where needed. One instructor cannot ensure that 14 students understand all the principals of rebuilding an engine at the same time. The addition of a lab tech would allow the instructor to provide the lesson while the lab tech can assist with the necessary touch points of training.
3. Continue to focus on New Technology and Hybrid Training advancements
    - It is essential with the rate and advancements that the industry is making in technology changes (ex. driver assist systems such as eyesight, lane departure/ lane keep, reverse automatic braking, adaptive cruise control, cross traffic alert, and Bluetooth systems) that the instructors are up to date on the functionality and repair of these systems. With the stronger move to hybrid vehicles in the future the program needs to have a plan in place as to how they are going to continue to purchase the necessary tools, train their instructors and develop and implement an ever changing curriculum.

4. Build more working relationships with your local dealers.
    - The local dealerships are depending on the success of this program to fulfill their employment needs. It is essential to take advantage of this relationship. The school can work with the dealers to provide tours of the dealers so students can see what the working experience is and the importance or relevance of what they are learning in class. Dealerships are throwing away parts that can be utilized in the training program. This would give students more real-world experience opportunities by working on parts that are currently failing.

5. The college needs to search for opportunities to increase enrollment.
    - The need for qualified technicians in the industry exceeds the number available. The college needs to hit the streets and promote themselves within the community they are part of. I would recommend getting out to the local dealerships and get them involved in your college career fairs. Invite local dealers to share and promote current and post-graduation employment opportunities. As well, the college should get involved with local car shows to promote their programs for people interested in cars. Many dealerships also hold these types of events. These types of cooperative efforts would guarantee the college more influence within the community for recruitment.

6. The college should consider expanding the automotive program to offer more industry and enrollment opportunities.
    - The program is limited with GM, Chrysler, and Subaru as is sole manufacturers. The college could expand its enrollment with developing training for other manufacturers, diesel or heavy truck training and an auto body and collision repair program. The costs and needs for these programs would need to be evaluated for profitability and sustainability.

In conclusion, the current curriculum is relevant to today's industry and is formulated to offer students the necessary training for a successful career in the automotive industry. It is important that the college continues to focus on the latest training in technology advancements. A strong recruitment effort will be necessary in the coming years to maintain the success of the program and can be aided by a strong working relationship with local dealers.

Respectfully Submitted,

Carolyn Cramsey
Service Director
Ciocca Subaru

Automotive Technology, Specialized Diploma (2020-21 Catalog)

Attachment 1

Developmental Education Courses *(if required)*		
☐	ACLS050	Introduction to Academic Literacy
☐	ENGL027	Writing Skills Workshop

SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion

Plans can be modified to fit student needs by adding more semesters

Choose your courses with your Advisor.

Location: B= BETH, M= MROE, S=SBTH, E= ESTN, D= DIST *subject to change

	complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
Semester 1	☐	COLS101	College Success	1		B,M,D	----	B, M, D	D	
	☐	AUTO100	Automotive Fundamentals	2		B	----	----	----	
	☐	AUTO103	Automotive Brakes	3		B	----	----	----	PRE: AUTO100
	☐	AUTO104	Autmotive Suspension & Alignment	3		B	----	----	----	PRE: AUTO100
	☐	AUTO105	Autmotive Electrical Systems	3		B	----	----	----	PRE: AUTO100
	☐	AUTO106	PA Safety Inspection Certificate	1		B	----	----	----	PRE: AUTO100
			Total Semester Credits:	13						
Semester 2	☐	AUTO145	Winter Practicum I	2		----	----	B	off site	PRE: AUTO103, 104, 105
	☐	AUTO125	Advanced Automotive Electronic Systems	3		----	----	B	----	PRE: AUTO105
	☐	MATH103	Applications in Mathematics	3	Math	B, D	----	B, M, D	----	
	☐	AUTO	Auto Elective	3		B	----	B	----	Depends on course selected
	☐	AUTO	Auto Elective	3		B	----	B	----	
	☐	AUTO	Auto Elective	3		B	----	B	----	
			Total Semester Credits:	17						
			Total Degree Credits	30						

Auto Electives		
AUTO101	Automotive Engines	4
AUTO121	Auto A/C & Heating Systems	1
AUTO211	Automotive Fuel & Emission Systems	3
AUTO221	Advanced Engine Performance	3
AUTO224	Advanced Automotive Studies	3
AUTO225	Mechanical Drive Train Systems	4
AUTO226	Automatic Transmission Systems	4
AUTO110	Introduction to Hybrid Vehicles	1

Notes:

- *Completion of AUTO203G satisfies the Writing Intensive(WI) requirement for this program*
- *Computer competencies are included in various courses in this program; thus, completing theprogram automatically satisfies the computing requirement for this program.*
- *AUTO110 Introduction to Hybrid Vehicles is offered Spring semesters as an elective.*

Career Information: Automotive Service Technician, Auto Electronics Specialist, Transmission and Drive Train Specialist, Alignment & Underbody Specialist

Leading To: Entry level technician

Automotive Service Consultant, Certificate (2020-2021 Catalog)

Attachment 2

Developmental Education Courses *(if required)*		
☐	ACLS050	Introduction to Academic Literacy
☐	ENGL027	Writing Skills Workshop

SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion

Plans can be modified to fit student needs by adding more semesters

Choose your courses with your Advisor.

Location: B= BETH, M= MROE, S=SBTH, E= ESTN, D= DIST *subject to change

	complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
Semester 1	☐	AUTO100	Automotive Fundamentals	2		B	----	----	----	
	☐	AUTO103	Automotive Brakes	3		B	----	----	----	PRE: AUTO100
	☐	AUTO104	Automotive Suspension & Alignment	3		B	----	----	----	PRE: AUTO100
	☐	AUTO105	Automotive Electrical Systems	3		B	----	----	----	PRE: AUTO100
	☐	AUTO106	PA Safety Inspection Certificate	1		B	----	----	----	PRE: AUTO100
	☐	CMTH102	Introduction to Communication	3	Comm.	B, M, D	----	B, M, D	B, M, D	
			Total Semester Credits:	15						
Semester 2	☐	AUTO130	Automotive Service Advising	3		----	----	B	----	
	☐	AUTO145	Winter Practicum I	2		----	----	B	off site	PRE: AUTO103, 104, 105
	☐	BUSA232	Principles of Marketing	3		B, M, D	----	B, M, D	D	PRE: ENGL101
	☐	BUSA137	Principles of Selling	3		----	----	B	----	
	☐	ENGL101	English I	3	Comm.	B, M, D	----	B, M, D	B, M, D	PRE: English Placement Policy
	☐	MATH103	Technical Mathematics	3	Math	B, D	----	B, M, D	----	
			Total Semester Credits:	17						
			Total Degree Credits	32						

Program Outcomes:

Upon successful completion of the Automotive Service Consultant program, the graduate should be able to:

- Have knowledge of basic vehicle systems and nomenclature
- To effectively interact with the customer
- Explain needed repairs in laymen terms to the customer
- Sell the customer needed repairs and services
- Communicate the customer's concerns accurately to technicians

Career Information: Service Consultant

Automotive Technology (Global, GMASEP, Chrysler) - Associate in Applied Science (2020-21 Catalog)

Attachment 3

Developmental Education Courses *(if required)*		
☐	ACLS050	Introduction to Academic Literacy
☐	ENGL027	Writing Skills Workshop

SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion

Plans can be modified to fit student needs by adding more semesters

Choose your courses with your dvisor.

Location: B= BETH, M= MROE, S=SBTH, E= ESTN, D= DIST *subject to change

	complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
Semester 1	☐	COLS101	College Success	1		B, M, D	----	B, M, D	D	
	☐	AUTO/ASEP/AUTC100	Automotive Fundamentals	2		B	----	----	----	
	☐	AUTO/ASEP/AUTC101	Automotive Engines	4		B	----	----	----	PRE or CO: AUTO/ASEP/AUTC100
	☐	AUTO/ASEP/AUTC103	Automotive Brakes	3		B	----	----	----	PRE or CO: AUTO/ASEP/AUTC100
	☐	AUTO/ASEP/AUTC104	Automotive Suspension & Alignment	3		B	----	----	----	PRE or CO: AUTO/ASEP/AUTC100
	☐	AUTO/ASEP/AUTC105	Automotive Electrical Systems	3		B	----	----	----	PRE or CO: AUTO/ASEP/AUTC100
	☐	AUTO/ASEP/AUTC106	PA Safety Inspection Certification	1		B	----	----	----	PRE or CO: AUTO/ASEP/AUTC100
			Total Semester Credits:	17						
Semester 2	☐	AUTO145	Winter Practicum	2		----	----	on-site	----	PRE or CO: AUTO/ASEP/AUTC103, 104, & 105
	☐	AUTO/ASEP/AUTC121	Auto Heating & Air Conditioning Systems	3		----	----	B	----	PRE: AUTO/ASEP/AUTC105
	☐	AUTO/ASEP/AUTC125	Advanced Automotive Electronic Systems	3		----	----	B	----	PRE: AUTO/ASEP/AUTC105
	☐	CMTH102	Introduction to Communication	3	Comm	B, M, D	----	B, M, D	B, M, D	
	☐	ENGL101	English I	3	Comm	B, M, D	----	B, M, D	B, M, D	PRE: ENGL Placement Policy
	☐	MATH103	Technical Mathematics	3	QL	B, M, D	----	B, M, D	----	
			Total Semester Credits:	17						
Sem.	☐	AUTO175	Summer Practicum	4		----	----	----	on-site	PRE: AUTO101, 103, 104, 105, 121, and 125
			Total Semester Credits:	4						
Semester 4	☐	AUTO203G	Automotive Shop Management Practices (WI)	3		B	----	----	----	PRE: AUTO175 & ENGL101
	☐	AUTO/ASEP/AUTC211	Automotive Fuel & Emission Systems	3		B	----	----	----	
	☐	AUTO/ASEP/AUTC221	Advanced Engine Performance	3		B	----	----	----	
	☐	AUTO/ASEP/AUTC224	Advanced Automotive Studies	3		B	----	----	----	PRE: AUTO/ASEP/AUTC101, 103, 104, 105, 121, 125,& AUTO175
	☐	ENGL151R	English II (Report Writing)	3	Comm	B, M, D	----	B, M, D	B,D	PRE: ENGL101
	☐	PHYS152	Physical Science II	3	SCI	B, D	----	D	D	
			Total Semester Credits:	18						
Semeste	☐	AUTO245	Winter Practicum II	2		B	----	B	B	PRE: AUTO125, 211, AUTO/ASEP/AUTC221
	☐	AUTO/ASEP/AUTC225	Mechanical Drive Train Systems	4		----	----	B	----	PRE: AUTO125 and AUTO 175
	☐	AUTO/ASEP/AUTC226	Automatic Transmission Systems	4		----	----	B	----	PRE: AUTO125 and AUTO 175
	☐	HUMA121	The American Work Experience	3	AH	B,D	----	B,D	D	

☐	GEOG121	Environmental Sustainability	3	SSHB	B,M,D	----	B,M,D	D	
		Total Semester Credits	16						
		Total Degree Credits	72						

General Education Requirements		
☐	GEOG121	Diversity
☐	AUTO203G	Writing Intensive

Notes:

- ASEP are GM-specific courses and AUTC are Chrysler-specific courses.
- Completion of AUTO203G satisfies the Writing Intensive (WI) requirement for this program
- Computer competencies are included in various courses in this program; thus, completing the program automatically satisfies the computing requirement for this program.
- Recommended additional non-credit course: Welding for Auto Techs.
- AUTO110 Introduction to Hybrid Vehicles is offered as an elective in the Spring Semester
- Students in Automotive Technology (AUTO) must be sponsored by an Automotive Repair shop for Practicums; students in Automotive Technology GM (ASEP) must be sponsored by a GM dealer forPracticums; students in Automotive Technology Chrysler (AUTC) must be sponsored by a Chrysler dealer for Practicums.

Program Narrative:

- Today's vehicles are highly sophisticated, using advanced technology that the average car-owner cannot maintain. Customers need and expect qualified automotive technicians now more thanever. Because of this, job opportunities for well-trained technicians continue to grow.
- NCC's program provides students with high-level technical understanding of current developments in the automotive service profession. Our program focuses on the mastery of technology as you prepare for the workplace. The two-year program is approved by GM and Chrysler, and features both classroom work and supervised experience at a sponsoring dealership or approved automotiveservice facility. Northampton's GM Automotive Service Educational Program (ASEP) and the Chrysler MOPAR College Automotive Program (MCAP) are both certified by the National Automotive Technician Education Foundation.

Program Features:

- As a student in NCC's associate's degree program you can choose among three different options: the GM ASEP, Chrysler MCAP, and global programs. The ASEP and CAP options focus on coursesdevoted exclusively to current GM or Chrysler vehicles. Global students may select courses which provide product specific information from either GM or Chrysler or non-product specific automotive courses. Our specialized diploma in Automotive Technology can be completed in just two semesters.
- Our program requires practicums so you can apply their classroom theory in the real world. During your practicum, you will work under the guidance of a mentor at an approved sponsoring automotive service facility. The knowledge and skills gained in this setting are extremely valuable.
- The cost of tuition, fees, hand tools and other expenses are the responsibility of the student; however, since students are employees of sponsoring dealerships and approved service facilities, theycan earn while they learn.

Program Learning Outcomes:

- Have the ability to demonstrate a positive attitude toward the efficacy of professionalism in the work place.
- Diagnose and repair mechanical systems of automotive engines; automatic transmissions and transaxles; manual drive trains and axles; suspension and steering systems; braking systems; electrical and electronic systems; heating and air conditioning systems; and engine performance systems.
- Exhibit logical thinking throughout essential areas of automotive diagnostics, using published technical information to repair a vehicle while meeting manufacturer's specifications.
- Demonstrate competence in the use of general and highly specialized tools and equipment.
- Demonstrate the ability to communicate effectively on both technical and lay levels.

Career Information:

- Career Information: Automotive Service Technician, Auto Electronics Specialist, Transmission and Drive Train Specialist, Alignment & Underbody Specialist
- Leading To: Service Writer, Shop Foreman, Specialty Technician

Attachment 4

Automotive Technology Degree for ASE Certified Technicians, AAS (2020-2021 Catalog)

Developmental Education Courses *(if required)*		
☐	ACLS050	Introduction to Academic Literacy
☐	ENGL027	Writing Skills Workshop

SEMESTER-BY-SEMESTER PROGRAM MAP FOR FULL-TIME STUDENTS

Courses are listed in preferred order of completion

Plans can be modified to fit student needs by adding more semesters

Choose your courses with your Advisor.

Location: B= BETH, M= MROE, S=SBTH, E= ESTN, D= DIST *subject to change

	complete	Course #	Course Title	Credits	Gen Ed	Fall	Winter	Spring	Summer	Pre-requisites / Co-requisites
Earned Credit	☐	AUTO	Courses taken through ASE Certification	33						
	☐	AUTO	Courses given for 2 years work experience	8						
	☐	AUTO	Course given for 45-60 hrs OEM or non OEM training	3						
			Total Semester Credits:	44						
Semester 1	☐	ENGL101	English	3	Comm	B, M, D	B, M, D	B, M, D	B, M, D	PRE:- English Placement
	☐	CMTH102	Introduction to Communication	3	Comm	B, M, D	B, M, D	B, M, D	B, M, D	
	☐	GEOG121	Environmental Sustainability	3				B		
	☐	MATH103	Technical Mathematics	3	QL	B, M, D	B, M, D	B, M, D	B, M, D	
			Total Semester Credits:	12						
Semester 2	☐	BUSA221G	Business Communications	3		B, M, D		B, M, D	D	Writing intensive. PRE: CMTH102 and ENGL151
	☐	HUMA121	American Work Experience	3		B, D		B, D		
	☐	ENGL151R	English II (Report Writing)	3	Comm	B, M, D	B, M, D	B, M, D	B, M, D	PRE: ENGL101
	☐	PHYS152	Physical Science II	3	SCI	B, D		D*	D*	
			Total Semester Credits:	12						
			Total Degree Credits	68						

General Education Requirements		
☐		Diversity
☐	BUSA221G	Writing Intensive

Notes:

•Students must complete ENGL101, ENGL151R and CMTH102 before taking BUSA221G Business Communications Completion of BUSA221G satisfies the Writing Intensive (WI) requirement for this program.

•*Check with department regarding PHYS152 offerings in spring and summer, as it varies year to year.

5. Curriculum Matrix - Program Learning Outcomes

"**I**" denotes a learning outcome that is introduced (*addressed for the first time*), "**R**" for a learning outcome that is reinforced (*addressed again, but not emphasized in a major way*), and/or "**M**" for a learning outcome that emphasized (*addressed in a major way, emphasis toward mastery*) under each specific course.

Program Learning Outcomes	100	101	103	104	105	106	121	125	145	175	203G	211	221	224	225	226	245
1. Have the ability to demonstrate a positive attitude toward the efficacy of professionalism in the work place.	I	I,R	I,R	I,R	I,R	I,R	I,R	I,R	I,R	R,M	R,M	R,M	R,M	R,M	R,M	R,M	M
2. Diagnose and repair mechanical systems of automotive engines; automatic transmissions and transaxles; manual drive trains and axles; suspension and steering systems; braking systems; electrical and electronic systems; heating and air conditioning systems; and engine performance systems.	I	I,R	I,R	I,R	I,R	R,M	I,R	I,R	I,R	R		R,M	R,M	R,M	I,R,M	I,R,M	R
3. Exhibit logical thinking throughout essential areas of automotive diagnostics, using published technical information to repair a vehicle while meeting manufacturer's specifications.	I	I,R	I,R,M	I,R	I,R	R,M	I,R,M	I,R,M	R,M	R,M		/R,M	R,M	R,M	R,M	R,M	R,M

4. Demonstrate competence in the use of general and highly specialized tools and equipment.	I	I,R	I,R,M	I,R	I,R	R,M	I,R,M	I,R,M	R	R,M		R,M	R,M	R,M	I,R,M	R,M	I,R
5. Demonstrate the ability to communicate effectively on both technical and lay levels.	I	I,R	I,R,M	I,R	I,R	I,R	I,R,M	I,R,M	R	R,M	R,M	R,M	R,M	R,M	R,M	R,M	R,M

Curriculum Matrix - Gen Ed (Key Learning) Outcomes

"A" denotes which Gen Ed learning outcome is addressed ion a specific outcome.

Gen Ed (Key Abilities) Learning Outcomes	100	101	103	104	105	106	121	125	145	175	203G	211	221	224	225	226	245
Communicate: Students will be able share their ideas powerfully and clearly.											A						
Analyze and Solve Problems: Students will be able to see and solved the problems around them, using solid data to draw and communicate reasonable conclusions.		A	A	A	A		A	A	A	A		A	A	A	A	A	
Understand Diversity: Students will be able to understand how each individual's experiences shape our society, and how societies, in turn, shape the way local and global resources are used.											A						
Engage in Ethical Questions. Students will be able to identify choices, consider alternatives and consequences, and choose actions keeping in mind everyone affected.											A						
Use Technology. Students will be able to select and ethically use appropriate technology to create, communicate, and discover.		A	A	A	A		A	A				A	A	A	A	A	

6. Student Placement – Companies and Positions

Companies Hiring NCC Automotive Graduates 2016-2020		
A2M Collision Center	Gilboy Automotive Group	Ray Price Mazda
Abeloff Buick GMC (2)	Gray Chrysler Dodge Jeep Ram	Rentschler Chevrolet
Angel's Auto Care	Hy-Tech Auto and Smog Inc	Rentschler Chrysler Jeep Dodge (2)
Anthony D'Ambrosia Chrysler Jeep Dodge RAM	J & S Auto Repair, LLC	Rides Restored
Auto Collision Specialist	Jack Williams Tire and Auto Service Center	Rothrock Motor Sales (5)
Bennett Toyota (2)	Judy's Auto Repair	Sands Chrysler Jeep Dodge
Bethlehem Ford	Lakeside Auto Plaza	Savage 61 Chrysler Dodge Jeep Ram
Bob Weaver Chevrolet Buick GMC	Lehigh Valley Hyundai (2)	Scott Chevrolet Cadillac (6)
Brown-Daub Chevrolet of Nazareth	Lexus of Lehigh Valley	Scott Mazda
Brown-Daub Chrysler Jeep Dodge Ram (6)	MAE-Eitel Inc.	Scott Mazda (2)
Brown-Daub Kia	Mavis Discount Tire	Star Buick GMC Cadillac (3)
Chevy21 (2)	McGuire Chevrolet Cadillac	Strohl Automotive Services
Ciocca Subaru (2)	Midas	Tri County Toyota
Daniels BMW	Penn Auto Group (3)	Vinart Dealerships
Faulkner Chevrolet	PennDot	Wind Gap Chevrolet Buick
Faulkner Subaru (2)	Pep Boys Bethlehem (2)	Young Volkswagen
Firestone Complete Auto Care	Performance Driveline, Inc.	

(#) Number of multiple students hired

Positions Filled	
Automotive Mechanic (1)	General Service Technician (1)
Automotive Technician (51)	GM Service Technician (1)
Certified Technician (1)	Main Shop Technician (1)
Co-Owner/Body Prep/Sales/Mechanic (1)	Mechanic/Service Writer (1)
Express Lane Technician (1)	Senior Automotive Technician (1)
Express Technician (1)	Service Advisor (1)
Field Service Technician (1)	Service Technician (13)

(#) Number of positions hired

7. Program Manager, Automotive Technology Position Guide

NORTHAMPTON COMMUNITY COLLEGE PROCEDURES

☐ Non-Exempt Position

2.03 Position Guide Approved 00/00/00

PROGRAM MANAGER, AUTOMOTIVE TECHNOLOGY

Primary Functions:

1) **Manage the College's Automotive technologies educational and training programs including, four comprehensive AAS degree programs based on the (1) General Motors Automotive Service Education Program (GM ASEP), (2) Mopar Career Automotive Program (MCAP), (3) Subaru University (Subaru- U), (4) Global Automotive Technology Program, Certification Programs, Specialized Diplomas, as well as customized contracted training; Instruct key areas of Automotive topics as required; develop and evolve the Automotive technologies educational & training programs.**

Responsibilities: Work with the Director of Advanced and Industrial Technologies, College staff, adjunct faculty, and community representatives to: (1) develop course curricula and assessment tools for Specialized Diploma, Certificate & AAS degree programs; develop, administer and promote newand existing credit and non-credit programs including customized contracted training for the local automotive service industry, including new car dealerships, independent garages, service stations, and specialty type repair facilities; collaborate with Community Education departments to market and sell contracted training to the automotive industry. modularize, organize, disseminate and manage all Automotive technologies equipment, systems, training and assessment information; (2) ensure delivery and quality of instruction for Automotive technologies-related courses: supervise and mentor adjunct instructors in all matters related to credit and non-credit courses; recruit, interview and train qualified adjunct staff for Automotive technologies instructors, evaluate adjunct performance in class, review student evaluations, and take appropriate action for improvement and ensure that training materials are prepared and available to and used by the adjunct instructors; (3) Instruct Automotive technologies courses on or off campus as needed equating to a teaching load of less than 12 credits per semester; (4) Manage and, with the assistance of lab technicians, construct, purchase and maintain all materials and lab equipment: upon approval, design and oversee the construction of lab apparatus andfacility changes; maintain existing equipment and apparatus; transfer, set up and tear down equipmentfor off-site locations as needed; (5) Assist the Director of Advanced and Industrial Technology in the credit and non-credit sections of the College in marketing the automotive programs: visit potential automotive customers to disseminate information about both non-credit and credit programs; continue dialog with automobile manufacturers (both foreign and domestic), enabling NCC to serve asa TRAINING CENTER for new model update training for automobile dealerships; assist in developing content for marketing pieces such as flyers and web pages; participate in promotional events such as trade shows, open houses, and career fairs; (6) assist in advising credit and non-credit students: participate in the annual student orientations; advise potential students on career and programs; advise matriculating students in course selection; (7) maintain a liaison relationship with the appropriate program advisory committees. (8) provide leadership for strengthening relationships in automotive programs with other schools and colleges. (9) carry out other related duties as assigned through the Director of Advanced and Industrial Technology Programs.

Organizational Relationships: Reports to the Director of Advanced and Industrial Technologies. (1) provides academic leadership to the Automotive Technology Program instructors and faculty. (2)coordinates work with the administrative and support staff in the development and delivery of courses, program, and contracted training services (3) relates role to College goals and mission. (4) represents the College to community organizations and employers.

Performance Standards: Performance in this position is considered satisfactory when: (1) Mutually agreed upon objectives are attained within a specific time frame. (2) Responsibilities of the position have been carried out on a level consistent with performance objectives. (3) Effective cooperative relationships exist with the other members of the administrative team, faculty, students, and community constituencies.

Qualifications: (1) Education: (a) Bachelor's degree with Automotive Emphasis preferred; or Automotive Engineering training, with experience in Automotive Technician training. (b) Attainment of appropriate industry-recognized certifications and or equipment certifications such as ASE Master Technician Certification along with ASE L1 a plus. (2) Skills, Knowledge, Abilities: (a) knowledge of current concepts, technologies and processes found in the automotive field; (b) knowledge of concepts in the areas of training, continuing and adult education, and non-traditional education; (c) ability to function effectively as a member of administrative and instructional teams; (d) able to organize and work effectively with small groups; (e) ability to develop programs in cooperation with others; (f)work effectively with diverse populations including students, faculty, administrators and community groups; (g) ability to make decisions which will positively affect the students and clients of the College;

(h) **Strong skills in interpersonal relationships. (3) Experience: (a) ten plus years of hands-on experience within the Automotive field, technical training or higher education; (b) working experience with the GM ASEP, MCAP, or the Subaru-U programs; (c) working with business and the automotive industry; (d) 5 plus years' experience in a training capacity program and development or instruction experience.**

Knowledge Skills and AbilitiesInstructional

- Knowledge of current and applicable instructional techniques and methods.
- Knowledge of relevant subject matter as it relates to the Automotive Technologyprogram
- Knowledge of computers and electronic instructional methodology.
- Knowledge of theoretical foundations of learning and instruction as applied to the face-to-face, hybrid, and distance learning modalities.
- Knowledge and understanding of competency-based learning methods.
- Able to use teaching strategies that will promote successful learning by addressingdifferent learning styles and approaches.
- Ability to use various assessment methods to enhance learning.
- Ability to understand, evaluate, and make appropriate use of instructional technology.
- Ability to form an inclusive environment that respects diverse talents and ways oflearning.
- Ability to understand and maintain a commitment to Equal Access/Equal Opportunity.
- Ability to work effectively in a diverse community and meet the needs of diversestudent populations.
- Ability to communicate effectively, both orally and in writing.
- Ability to relate to and communicate effectively with a diverse population in amulticultural environment.

Technical –Automotive Mechanics and Theory

- General, GM, Mopar, and Subaru Automotive Fundamentals
- General, GM, Mopar, and Subaru Automotive Engines
- General, GM, Mopar, and Subaru Automotive Brakes
- General, GM, Mopar, and Subaru Automotive Suspension & Alignment
- General, GM, Mopar, and Subaru Automotive Electrical Systems
- General, GM, Mopar, and Subaru Automotive Fuel & Emission Systems
- General, GM, Mopar, and Subaru Automotive Advanced Engine Performance
- General, GM, Mopar, and Subaru Automotive Advanced Studies
- General, GM, Mopar, and Subaru Automotive AC & Heating Systems
- General, GM, Mopar, and Subaru Automotive Advanced Electronic Systems
- General, GM, Mopar, and Subaru Automotive Mechanical Drive Train Systems
- General, GM, Mopar, and Subaru Automotive Automatic Transmission Systems
- Introduction to Hybrid and Electric Vehicles
- PA Safety Inspection Certificate
- General Automotive Shop Management Practices
- General Automotive Service Advising
- Hybrid and Electric Vehicles

Technical –Automotive General

- Experience with the proper use of standard tools and measuring equipment
- Experience in implementing all safety standards as it related to the automotiveindustry
- Maintain and update the program inventory
- Maintain all service and inspection records for tools, lifts, and trainers
- Responsible for meeting all administrative deadlines
- Oversee and maintain the condition of all program classrooms, labs, and shop facilities
- Manage the hiring, scheduling and developmental process for the program adjuncts