Taft College Automotive Technology Program
National Automotive Technicians Education Foundation Certification
April, 2008

Summary of Certification Process

The purpose of the Automobile Technician Training Certification Program (NATEF) is to improve the quality of training offered at the secondary and post-secondary levels. NATEF does not endorse specific curricular materials nor provide instruction to individuals, groups, or institutions. It does, however, set standards for the content of instruction, which includes tasks, tools, and equipment, hours, and instructor qualifications.

The certification process begins with an extensive self-evaluation performed by training program instructors, administrators, and advisory committee members. Members of this group compare the program to national standards, and have the opportunity to make improvements before submitting evaluation documents to NATEF. Self-evaluation materials are then sent to NATEF, where they are reviewed to determine if the program qualifies for an on-site team evaluation.

If the program qualifies, a two-day on-site evaluation is conducted by a four-member NATEF visiting team, which includes curriculum review, instructor qualifications review, and facility inspection. The final report of the NATEF evaluation team and all additional evaluation materials are submitted to the Automotive Service Excellence (ASE) Board. The ASE President will approve certification as sanctioned by the Board of Directors. Programs must be re-certified every five years and are reviewed at mid-term (2 ½ years), at which time a compliance report is required to verify that a program is maintaining its standards. Estimated costs for certification and recertification are $1,125 and $790.

After initial application for certification, programs have a maximum of 18 months to complete the certification process. The first step in initiating a certified program is to form an Advisory Committee.

An advisory committee must include at least five members, but can include up to fifteen members, with a time limit for terms, and the terms should be staggered. Five of the committee members may not be school personnel. The committee should be broadly based and include former students, employed technicians, employers, and representatives for consumers' interests. The advisory committee must conduct at least two working meetings a year and should concentrate its efforts in the following areas: curriculum content, career guidance and placement for students, community public relations, equipment, facilities, and resources review, and program review. Minutes of the meetings must be provided for review by the on-site evaluation team and must reflect relevant areas of the standards as having been considered by the advisory committee.

There are eight automobile areas that may be certified:

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

An institution is required to offer a minimum curriculum in these four areas to be eligible for NATEF certification:

- Brakes
- Electrical/Electronic Systems
- Engine Performance
- Suspension and Steering

Automotive Standards Statements (attachment A)

There are ten Automotive Standards Statements required for certification. A minimum score of 4 on a 5-point scale is required for Standards 6, 7, 8, 9 for certification. Less than a 4 on Standards 1-5 and 10 may jeopardize program approval. The standards are:

Standard 1 – Purpose
The automobile technical training program should have clearly stated program goals, related to the needs of the students and employers served.

Standard 2 – Administration
Program administration should ensure that instructional activities support and promote the goals of the program.

Standard 3 – Learning Resources
Support material, consistent with both program goals and performance objectives, should be available to staff and students.

Standard 4 – Finances
Funding should be provided to meet the program goals and performance objectives.

Standard 5 – Student Services
Systematic skills assessment, interviews, counseling services, placement, and follow-up procedures should be used.

Standard 6 – Instruction
Instruction must be systematic and reflect program goals. A task list and specific performance objectives with criterion referenced measures must be used.

Standard 7 – Equipment
Equipment and tools used must be of the type and quality found in the repair industry and must also be the type needed to provide training to meet the program goals and performance objectives.

Standard 8 – Facilities
The physical facilities must be adequate to permit achievement of the program goals and performance objectives.

Standard 9 – Instructional Staff
The instructional staff must have technical competency and meet all state and local requirements for certification.

Standard 10 – Cooperative Agreements
Written policies and procedures should be used for cooperative and apprenticeship training programs. (This applies only to programs that offer cooperative/apprenticeship training.)

Program Faculty

All instructors must hold current ASE certifications in the automotive technology areas where they teach and which are being evaluated for program certification.

All instructors must attend a minimum of 20 hours per year of recognized industry update training relevant to the areas in which their program is certified.

To ensure instructional continuity, competent automobile substitute instructors should be used.

Curriculum

Each program area has a required minimum number of instructional hours:

- Brakes – 105 hours
- Electrical/Electronic Systems – 230 hours
- Engine Performance – 220 hours
- Suspension and Steering – 95 hours
- Automatic Transmission and Transaxle – 120 hours
- Engine Repair – 120 hours
- Heating and Air Conditioning – 90 hours
- Manual Drive Train and Axles – 100 hours

NATEF Task Lists (attachment B)

The NATEF Standards recognize that program content requirements vary by program type and by regional employment needs. Therefore, flexibility as been built into the NATEF task list by assigning each task a priority number. The priority number indicates the minimum percentage of those tasks, by area, a program must include in their program in order to be certified in that area. The Task List is divided into three priority areas. The following guidelines must be followed:

95% of all Priority 1 (P-1) tasks must be taught in the curriculum
80% of all Priority 2 (P-2) tasks must be taught in the curriculum
50% of all Priority 3 (P-3) tasks must be taught in the curriculum

Requirements for Facility

1. Adequate number of training stations (bench and on-vehicle service and repair work)
2. Compliance with personal and environmental safety practices
3. Written facilities maintenance program
4. Housekeeping provided
5. Instructor office space
6. Separate classroom instruction area
7. Adequate storage and security
8. Restrooms and clean-up areas for both male and female students
9. Adequate ventilation, heating, and cooling
10. First aid kit
11. Annual evaluation of facility by Advisory Committee

Evaluation of Current Program and Recommendations

Curriculum

Automotive Technology is a subject of interest to students pursuing a career in the field, those who are just interested in the subject for personal knowledge, and car enthusiasts. The program in place serves all groups. The computer-based lecture portion of the classes is a valuable tool that is of a good quality and provides the student with the technical information necessary to understand the fundamentals of auto tech. It can be accomplished independently by the students, and is supplemented with a library of videos for additional study as well.

Individual modules on computer are adequate for most subject matter areas. The programs are easy to use and complete, and for the most part are geared towards the entry level student. However, an upgrade may need to be considered in the near future (approximately a $5,000 cost). The individual components of the current computer programs need to be matched to specific course outlines. Specific laboratory tasks need to be performed by the students that reflect a practical application of the course material that can be evaluated by the instructor at appropriate intervals. A final exam should be required.

It would be desirable to have an instructor who understands all student types—including the hobbyist who works on his own home project, and the student who sees his future in automotive repair. Beyond the computer lessons, the instructor must serve as a role model in the lab and convey to students that automotive repair consists of as much problem solving, hard work, and desire to find the answer to the problem as technical knowledge.

Computers and printers need to be restored to 100% functionality including new headsets. There are eight computers including the instructor's. Three of them do not print, and the Internet connection is extremely slow. A new printer is needed as well ($400).

All students should be required to complete a basic shop and tool safety course which includes chemical handling, hazardous waste disposal to satisfy state and local regulations, personal safety, and expectation regarding shop rules and maintenance prior to performing any work in the lab. Practical application of what is learned should be duplicated in the lab setting.

High Priority Safety Issues ($1,400):

- Safety devices on vehicle lifts are non-operative and need repair (price included on tools list)
- Grinders need safety shields ($100)
- Overhead air and water hoses need to be replaced ($150)
- Electrical panels need to be labeled as to which breaker goes to what piece of equipment
- Approximately five exhaust evacuation hoses need to be replaced ($150)
- Chemical storage locker needs to be purchased ($500)
- Payment for proper disposal of environmental waste (used oil, oil filters, coolant) needs to be added to yearly operational budget (approximately $200 a year)
- Bilingual signs need to be posted stating that only shop personnel and students are allowed in the shop area, and this needs to be enforced, with walkways clearly designated on the floor ($100)
- Bilingual safety signs should be posted as reminders to students regarding eye and hearing protection, etc. ($200)
- First aid and eye wash stations need to be relocated to a more accessible area
- A system needs to be developed to hold students responsible for cleaning up their work area, replacing tools, and maintaining and identifying their projects in an orderly fashion
- Repair and/or replace faulty equipment and tools ($1,425—attachment C)

Recommendations for Long Term Continuation of the Program:

- Upgrade the facility's cooling system
- Upgrade lighting including motion switches in restroom, instructor office, and tool room
- Install new plumbing to provide additional air stations close to work areas
- Key the auto shop portion of WESTEC separately so it can be secured
- Relocate or discard old equipment from WESTEC to increase usable space
- Reorganize shop area to include training stations
- Establish a "dirty" area for students to wash parts, disassemble engines, clean transmissions, prepare parts for disassembly. Reassembly of components should be performed in a separate part of the shop or "clean" area.
- Organize specialty tools on wall-mounted tool boards in work areas
- Build a fully operational computer controlled engine that can be used for demonstration purposes. The instructor could set faults in the engine that could be diagnosed and repaired by the students.
- Organize and catalog printed automotive repair manuals in one area by car manufacturer, type, and year
- Upgrade on-line automotive reference repair library software (All Data or Mitchell 1), approximately a $1400 cost for the first year, and $1000 each year thereafter
- Upgrade computer curriculum program, approximately a $5,000 cost

Conclusion

While being the ultimate goal to legitimize the automotive program at Taft College, NATEF Certification is not realistic in the short term. The beginning steps to certification must be put into place (establishment of an advisory committee, development of goals, a plan and timeline). At least a two-year commitment to improving the program in preparation for considering NATEF certification is recommended. A minimum initial investment of $23,212 is required to update tools and equipment to NATEF specifications and provide minimum safety improvements. In addition, an investment will be required to update the facility to qualify under NATEF Certification standards.

A dedicated faculty will need to be brought on board to perform the self-evaluation study with the Vocational Education Coordinator, the advisory committee members, counselors, and administrators to ensure that the Automotive Standards Statements are met and maintained. In addition, substantial curriculum review and documentation will be required in preparation for the site visit. Relationships with local businesses need to be fostered and a student placement system established.

Credibility and a positive image of the program must be re-established in the community to attract students. A relationship with the high school should be developed so that graduates and even advanced high school students would be interested in taking Taft College courses because they know they will learn something of value to take away with them, whether they decide to go into the auto technology field, or not.

The attached list (attachment D) for cost of safety upgrades, tools, equipment, and shop organization which includes three levels: What is required for full NATEF Certification ($37,580), Minimum NATEF Certification available ($23,212), and the lowest cost level to maintain and improve the program while preparing for future certification ($11,172). These amounts do not include any major upgrades to the facility.