Ferris State University

College of Technology

Automotive Department

Program Review

Of The

Associates in Automotive Service Technology

2001-2002

April 30, 2002

MEMORANDUM

DATE: November 21, 2002

TO: Academic Senate

FROM: Academic Program Review Council

RE: Recommendations for:
Associate in Applied Science Degree in Automotive Service

CC: Greg Key, Weilin Chang, Laurie Chesly, Thomas Oldfield, Barbara Chapman

DESCRIPTION OF PROGRAM:

AAS Degree in Automotive Service

Automotive service technicians are responsible for keeping the nations automobiles safe, economical, non-polluting and in peak operating condition. Auto service technicians provide any repair service required such as electrical and driveability service, brake repairs, wheel alignment and balancing, engine service or transmission and other driveline repairs. Some technicians specialize in such areas as driveability, automatic transmission service or wheel alignment.

In modern, completely-equipped facilities, students are trained to diagnose, measure, inspect, repair or replace worn parts, repair automotive engines; service disc and drum brakes, power steering and suspension parts, and align and balance wheels. Service of automatic transmissions, rear axles, clutches and universal joints is included.

Students also test, diagnose, service or replace electronic and computerized controls, fuel injection components and such accessories as air conditioning units, power windows and seats, lighting circuits and safety and warning devices. All service is done in conjunction with current environmental and safety standards. Students experience over 550 hours repairing and adjusting customer vehicles under the supervision of the automotive service faculty in a well-equipped service shop. Automotive electricity and basic computer skills are also covered.

The automotive service technology program also has three corporate options, which allow students to specialize in servicing vehicles of a specific manufacturer. The General Motors program is the Automotive Service Educational Program (ASEP). Ford has the Automotive Student Service Educational Training (ASSET) program and the Chrysler program is Chrysler Apprentice Program (CAP). With these options, students receive product specific training on GM, Ford or Chrysler products and are employed in sponsoring dealerships every other semester. They graduate at the end of two years as qualified GM, Ford, or Chrysler service technicians.

Automotive service technicians work for car dealerships, independent garages, mass merchandisers and fleet service shops. Experienced technicians may become service advisors, shop foremen or service managers, service facility owners or lab technicians for automakers.

An entering student needs a high school diploma or equivalent and a math background for placement in MATH 110 or higher. Each student must also buy hand tools and protective eye devices and have work uniforms.

Associate degree graduates may spend two additional years in college to earn a BS in automotive and heavy equipment management.

Graduates must complete all Ferris general education requirements as outlined in the General Education section of the University catalog.

COST INFORMATION:

According to the 1999-2000 report from institutional research:

	Total cost per SCH
AAS Degree in Automotive Service Technology	$291.81
	Total program cost
AAS Degree in Automotive Service Technology	$19,843.19

RECOMMENDATIONS:

We recommend that the program be continued.

(1) The program has a number of important strengths:

- The career orientation of the program is central to the Ferris' mission.
- The Automobile Service Program is one of three AAS programs in the state and is the largest of these programs. This program is highly visible to industry and receives considerable support through donation of automobiles, equipment and manuals from US automakers.
- Through the placement of graduates, this program provides trained employees for the automobile service industry in the state.
- The quality of instruction is high based on student, alumni, and employer surveys and the continued support from the major US automakers.
- A demand exists for the program as is demonstrated by a relatively stable enrollment for the last five years at a level close to the cap.
- There is a very high demand for graduates of the program as is evidenced by the almost 100% placement rate of students. There is every indication that for the immediate future the demand will increase.
- According to survey data, the average starting salary of a graduate of this program is $37,282.84 compared to a national average for automotive technicians of $29,307.
- The faculty is experienced and well qualified.
- The faculty is very involved in continuing education and consulting activities.
- The faculty works very hard at keeping current with a rapidly changing industry.
- The faculty and administration have been able to acquire extensive equipment and donations from industry.

(2) We recommend that the following steps need to be taken to maintain the quality of these program:

- The faculty of the Automobile Service Program and the administration of the College of Technology should make a thorough assessment of the allocation of Supply & Expense funds to and within the Automotive Department.
- The faculty of the Automobile Department and the administration of the College of Technology should evaluate the impact of the new BS program on the financial and instructional resources allocated to the Automobile Service Program.
- The faculty of the Automobile Service Program and the administration of the College of Technology should make a thorough assessment of the current facilities. They should include recommendations concerning the facilities in future Unit Action Plans.
- The Administration of the College of Technology and the University should consider the use of existing University owned buildings that are already compatible with the requirements of the Automobile Service program to help alleviate the problems associated with the scheduling of and conducting classes in the Automotive Service Center.
- The faculty of the Automobile Service Program and the administration of the College of Technology should continue to look to industry for support of this program.
- The administration of the College of Technology and the University should consider establishing an annual capital equipment budget for this program.

Criteria Summary for
AAS Degree in Automotive Service

AAS Degree in Automotive Service

Automotive service technicians are responsible for keeping the nations automobiles safe, economical, non-polluting and in peak operating condition. Auto service technicians provide any repair service required such as electrical and driveability service, brake repairs, wheel alignment and balancing, engine service or transmission and other driveline repairs. Some technicians specialize in such areas as driveability, automatic transmission service or wheel alignment.

In modern, completely-equipped facilities, students are trained to diagnose, measure, inspect, repair or replace worn parts, repair automotive engines; service disc and drum brakes, power steering and suspension parts, and align and balance wheels. Service of automatic transmissions, rear axles, clutches and universal joints is included.

Students also test, diagnose, service or replace electronic and computerized controls, fuel injection components and such accessories as air conditioning units, power windows and seats, lighting circuits and safety and warning devices. All service is done in conjunction with current environmental and safety standards. Students experience over 550 hours repairing and adjusting customer vehicles under the supervision of the automotive service faculty in a well-equipped service shop. Automotive electricity and basic computer skills are also covered.

The automotive service technology program also has three corporate options, which allow students to specialize in servicing vehicles of a specific manufacturer. The General Motors program is the Automotive Service Educational Program (ASEP). Ford has the Automotive Student Service Educational Training (ASSET) program and the Chrysler program is Chrysler Apprentice Program (CAP). With these options, students receive product specific training on GM, Ford or Chrysler products and are employed in sponsoring dealerships every other semester. They graduate at the end of two years as qualified GM, Ford, or Chrysler service technicians.

Automotive service technicians work for car dealerships, independent garages, mass merchandisers and fleet service shops. Experienced technicians may become service advisors, shop foremen or service managers, service facility owners or lab technicians for automakers.

An entering student needs a high school diploma or equivalent and a math background for placement in MATH 110 or higher. Each student must also buy hand tools and protective eye devices and have work uniforms.

Associate degree graduates may spend two additional years in college to earn a BS in automotive and heavy equipment management.

Graduates must complete all Ferris general education requirements as outlined in the General Education section of the University catalog.

- **CENTRALITY TO FSU MISSION:**

  The career orientation of the program is in keeping with the mission of Ferris State University.

- **UNIQUENESS AND VISIBILITY OF PROGRAM:**

  This program is one of three programs in the state of Michigan that offer an AAS in Automotive Service and is the largest of these programs. The Automotive Service Program has ties with the major US automakers and receives approximately $200,000 a year in vehicle donations plus training manuals, equipment manuals, engines, tools, and faculty update training.

- **SERVICE TO STATE, NATION, WORLD:**

  Most graduates of the program work in Michigan. A significant number of students from other states have enrolled in the program.

- **DEMAND BY STUDENTS:**

  Shortly after the last program review, enrollment showed a significant increase and has been relatively stable for the last five years at a level that is close to the cap.

- **DEMAND FOR GRADUATES:**

  In the graduate survey, 89% indicated that it was easy to find a job.

- **PLACEMENT RATE AND AVERAGE SALARY OF GRADUATES:**

  Placement rate of those students who do not choose to continue their education is close to 100%. The average starting salary for employees as reported in the graduate survey is $37,282.84. The average current salary in the same survey was $46,428.58.

- **SERVICE TO NON-MAJORS:**

  No service to non-majors was described in the report. Two courses for non-majors are on the books but they are not offered due to faculty overloads in other courses.

- **QUALITY OF INSTRUCTION:**

  The quality of instruction is high based on student, alumni, and employer surveys and the continued support from the major US automakers. Sixty two percent of the graduates were able to obtain their ASE/Michigan certification, which is significant number since many employers do not require such certification.

- **FACILITIES AND EQUIPMENT:**

  The Automotive Center is one of the oldest buildings on campus and was not specifically designed for the current needs of the automotive service industry. Through the support of the automotive industry, the program is well equipped.

- **LIBRARY INFORMATION RESOURCES:**

  The library resources are adequate.

- **COST:**

  According to the 1999-2000 report from institutional research:

	Total cost per SCH
AAS Degree in Automotive Service Technology	$291.81
	Total program cost
AAS Degree in Automotive Service Technology	$19,843.19

- **FACULTY:**
  - **QUALIFICATIONS:**
    All instructors are ASE certified.
  - **PROFESSIONAL AND SCHOLARLY ACTIVITIES:**

    The faculty is active in professional organizations and is continually involved in training related to the rapid changes that occur in the industry.
  - **QUANTITY:**

    Several of the faculty has carried overloads in order to meet the instructional needs of the program and department.
- **ADMINISTRATIVE EFFECTIVENESS:**

  The turnover of upper level administration in the College of Technology has made it difficult for the Department to plan and carry out its mission. The administration has, however been very successful in obtaining industrial support in terms of equipment donations and scholarships from major corporations.

MEMORANDUM

DATE: November 21, 2002

TO: Academic Senate

FROM: Academic Program Review Council

RE: General Recommendations for Programs reviewed in the 2002-2003 review cycle

CC: Vice-Presidents Chapman, Oldfield, and Chesley; All Deans

Approximately one year ago 12 panels charged with reviewing a total of 18 programs were formed. These panels were composed of program faculty and friends of the program. The panels collected information, analyzed that information, and wrote thorough and rigorous reports that detailed the status of the programs. These reports also identified needs of the programs. Based upon the written documents submitted to the Academic Program Review Council, the answers to written questions generated by the Council, and discussion with panel members and program administrators, the APRC has generated specific recommendations for each program reviewed. These recommendations have been submitted as separate memos. On behalf of the entire University, the APRC extends its appreciation and gratitude for the work done by the program review panels.

GENERAL RECOMMENDATIONS

The following recommendations are derived from our collective review of the programs and represent our suggestions for addressing concerns that affect more than one program in the University. A review of general recommendations from previous Academic Program Review Council reports reveals that, although progress has been made, some programs still encounter the same or similar difficulties observed in previous years. It is clear many of these problems must be solved at the institutional level. If a similar recommendation was made previously, the years are indicated in parentheses.

THERE SHOULD BE A MORE THOROUGH PROOFREADING OF THE UNIVERSITY CATALOG BEFORE IT IS PUBLISHED.

At the beginning of each recommendation memo, under the section titled program description, a statement concerning each program is reproduced exactly as it appears in the online catalog. Often, the first impression of the University that is gained by prospective students and the general public is obtained through the Catalog. Therefore, it is a matter of concern when there are misspellings and examples of poor use of language in one of the most visible documents of the University.

THE ANNUAL REPORT ON THE CUMULATIVE IMPACT OF ACADEMIC PROGRAM REVIEW RECOMMENDATIONS SHOULD LIST THE RECOMMENDATIONS MADE BY THE COUNCIL AND THE SPECIFIC ADMINISTRATIVE RESPONSE TO THEM.

The Academic Program Review Council would like to thank Vice-President Chapman for providing the Senate and the Council with an Annual Report on the Cumulative Impact of Academic Program Review, which was in the form of a memo dated August 5, 2002. The Council recognizes that it may not be possible for the University to completely address all of the recommendations made by the Council in a calendar year and appreciates the efforts of the administration to follow up on the issues that are raised. The Council notes, however, that some of the actions taken do not directly correspond to the actual recommendations of previous Councils. For the sake of clarity of communication, the Council requests that in future updates, starting with the current review cycle, there be a list of the specific recommendations of the Council and the administrative response to them (2001-2002). There is a precedent for this in the memo from Teshome Abebe, former Provost and Vice-President for Academic Affairs dated July 30, 1996 in which he provided a status report on the progress that had been made concerning the Senate-approved APRC recommendations for programs reviewed in 1995-1996.

OTHER DIVISIONS OF THE UNIVERSITY SHOULD BE REVIEWED WITH RESPECT TO THE QUALITY OF SERVICE THAT THEY PROVIDE TO ACADEMIC PROGRAMS AND THE EDUCATIONAL MISSION OF THE UNIVERSITY. FEED BACK CONCERNING THE OUTCOME OF THESE REVIEWS SHOULD BE SUPPLIED TO THE ACADEMIC SENATE AND THE ACADEMIC PROGRAM REVIEW COUNCIL.

The Council appreciates the decision by the administration to develop a review process for University Advancement and Marketing and the computer consortia. The council would like to point out, however, that the focus of these reviews as described in the memo from Dr. Chapman dated August 5, 2002 does not completely address the concerns of previous Academic Program Review Councils. Hopefully the QI2000+ Committee mentioned in the document will establish a thorough process of review of divisions in the University that support and serve academic programs so that, when problems arise because of policy or implementation of policy, a mechanism will be in place to correct the problems and allow affected programs input in the development of new policies. The purpose of this request is to ultimately improve the quality of academic programs (2000-2001, 2001-2002).

THE UNIVERSITY SHOULD REVIEW THE POLICIES ASSOCIATED WITH THE ISSUING OF STUDENT ID CARDS AND THE PROCEDURES FOR ASSIGNING STUDENT BARCODES.

Students still have trouble accessing library databases from off-campus. Barcode numbers needed for database login are not tracked when ID's are issued so students must call the library to have their barcode entered before they can access the databases from off-campus. The FLITE staff has worked diligently to alleviate some of these problems, however, much of the difficulty could be avoided by coordination between Telcommunications and FLITE.

THE UNIVERSITY AND, IN PARTICULAR, THE COLLEGE OF ARTS AND SCIENCES, SHOULD ENSURE THAT AN ADEQUATE NUMBERS OF COURSES, OFFERED IN AN APPROPRIATE FORMAT (12 WEEKS), ARE OFFERED DURING THE SUMMER SEMESTER.

The curricular design in several of the colleges (particularly Allied Health and Business) requires that students build a full load schedule during the summer. While offering courses of varying lengths during the summer may be convenient for faculty, such an arrangement makes it extremely difficult for students to achieve a full load of classes. That in turn may cause the student to choose a course based on the timeframe in which it is offered rather than the its educational value.

THE UNIVERSITY SHOULD REQUIRE THAT THE ADMINISTRATIVE PROGRAM REVIEW FORMS SHOULD BE FILLED OUT ACCURATELY AND COMPLETELY.

The Administrative Program Review documents provided to the council by the program panels varied significantly with respect to their completeness and reliability. In several cases, questions on the form were not answered and data related to enrollment according to class standing and the number of graduates in a given year was not listed. The Council relies heavily on this document in assessing the status and viability of each program.

THE DESIGN AND DISTRIBUTION OF SURVEYS FOR ACADEMIC PROGRAM REVIEW SHOULD BE PROCESSED THROUGH A CENTRAL UNIVERSITY OFFICE WITH INPUT FROM THE PROGRAM REVIEW PANEL.

The academic program review process relies extensively on information gathered through surveys. It is apparent to the council that this type of activity should be coordinated through a central office, which provides services to panels for programs undergoing review. Most program faculty are not trained or experienced in survey methodology. This often results in poorly designed surveys, low response rate, and information of dubious validity. This problem is compounded by the fact that other divisions within the University are sending out different surveys, in many cases to some of the same individuals. It is true that different divisions within the University may be interested in obtaining different kinds of information, however there is certainly a basic core of information that is important to all units within the University. A standardized survey form should be designed and distributed utilizing established survey methodology. This form should allow individual programs or units in the University to ask additional specific questions related to information unique for their needs. The staff of this central office should provide support for follow up procedures to ensure adequate response rates. They should also assist the program review panels in the use of applicable statistical procedures to insure proper interpretation of the data.

THE UNIVERSITY NEEDS TO HAVE A CENTRAL DATABANK THROUGH WHICH ALUMNI AND GRADUATES OF PROGRAMS ARE TRACKED.

Most panels reported that significant numbers of surveys were returned due to an incorrect address. There is no question that in this mobile society it is difficult to keep track of individuals, however, if there is a cooperative approach to collecting data from various sources on campus, it should be possible to increase the reliability of existing databases.

INSTITUTIONAL RESEARCH SHOULD COMPILE THE INFORMATION REQUIRED BY PROGRAM FACULTY AND ADMINISTRATORS FOR THE PROGRAMS UNDERGOING THE ACADEMIC PROGRAM REVIEW PROCESS.

The document titled Academic Program Review: A Guide for Participants lists some specific types of information that are required for the review process. Currently, the seeking out and collecting of relevant programmatic information on an individual basis is an inefficient process and is an inordinately consuming use of program faculty and administrator's time. The previous Academic Program Review Council did meet with a representative from Institutional Research last spring to discuss their methods of data collection and how they arrived at their interpretation of the data. At that time, this individual expressed a willingness to work with the Panels in obtaining the information that they need. The current Academic Program Council should develop a specific list of the information that is required and communicate this to the staff in Institutional Research. The council requests administrative approval for this expansion of duties by the staff of Institutional Research (2001-2002).

THE UNIVERSITY SHOULD CONTINUE TO EXPLORE WAYS IN WHICH IT CAN HELP PROGRAMS MAINTAIN AND ACQUIRE NEW EQUIPMENT AS THE NEEDS OF INDUSTRY CHANGE.

The Council appreciates the response of the administration documented in Dr. Chapman's August 5, 2002 memo to previous recommendations concerning maintenance and acquisition of equipment. The Council also recognizes there is no way that the University can fund all of the equipment requirements of all of the programs at the University. With a few exceptions, most of the programs reviewed this cycle had adequate facilities and equipment. However, concern was expressed by several program panels related to funding for maintenance, replacement of equipment items, and the purchase of new equipment. Updating of computers to handle increasingly sophisticated software continues to be a problem. The University should continue to provide support for the maintenance of equipment and establish funds the upgrading of equipment. The procedures for requesting such funds should be widely communicated throughout the campus. In addition, the University should continue to encourage and support the efforts of faculty and program administrators as they seek off campus sources of equipment and resources. (1995-1996, 1997-1998, 1998-1999, 1999-2000, 2001-2002)

THE UNIVERSITY SHOULD INVEST IN PROGRAM SPECIFIC ENROLLMENT AND RECRUITING EFFORTS:

The current guidelines for the academic program review process require the APRC to evaluate enrollment in programs as a part of the review process. Low enrollment in a program does have a direct impact on program cost and faculty productivity (as defined by the business operations of the University), particularly in programs that are laboratory and technology intense. Low enrollment does not necessarily have a direct relationship to the quality of education that is delivered to students.

As far as the Academic Program Review Council was able to determine, at least with respect to the programs that were reviewed this year, low enrollment levels were unrelated to the quality of instruction, the availability of jobs in the field, the potential salaries of employees in the field, and even the availability of financial aid in the form of scholarships to students. Some of the under-enrolled programs that were reviewed this year have few or no competitors in the state of Michigan and in some cases in the country. The faculty in several

of these under-enrolled programs has made an intensive recruiting effort, which seems to have had only a limited impact on increasing student numbers. On the other hand, new degree initiatives in the College of Education and Human Services and in the College of Arts and Sciences have resulted in programs with rapidly increasing enrollments but limited opportunities in the job market. The difference seems to be the visibility of programs to prospective students.

It has become apparent to the members of the Council, particularly those who have served several years, that allocating a few marketing dollars to a program with enrollment difficulties and creating an attractive brochure does little to increase student numbers. Asking faculty to spend increasingly more time in recruitment efforts is not a particularly productive or effective approach to solving the problem. Typically faculty members have had little, if any, training in marketing techniques, demographic analysis, and brochure design. Most faculty members choose teaching because of their love of their subject area and their desire to share their knowledge with students, not because of an interest in the marketing of their program to prospective students.

If the University is truly committed to its historic mission of preparing students for a career and wishes to continue to serve the state of Michigan by providing graduates who are prepared to work in vital areas of our economy such as heavy industry or health care and yet maintain the fiscal viability of the University, it must address the issues related to the marketing low enrollment programs at an institutional level. It must supplement the efforts of faculty and administrators in programs with low enrollment through the use of institutional resources for focused marketing that increases the visibility of low enrollment programs and increases the awareness on the part of prospective students that many of the programs at Ferris State University lead to career options in vital industries in which high paying jobs are going unfilled.

THE ACADEMIC SENATE SHOULD REVIEW ITS CHARGE TO THE ACADEMIC PROGRAM REVIEW COUNCIL.

The Academic Program Review Council has begun the second round of program review. It is time to review and to reevaluate the criteria that are utilized as the basis for recommendations that are listed in the document Academic Program Review: A Guide for Participants. The academic program review process should focus on the quality of instruction offered in each program. Some of the criteria mentioned previously seem to have a marginal relationship to that goal, at best. For example, the focus on enrollment, productivity, cost of instruction, demand for graduates and the salaries they achieve are certainly of interest and importance to the administration. The question that arises is whether the academic program review process is the appropriate medium to collect and tabulate that data. Perhaps the academic program review process should focus more directly on what skills or competencies are required of graduates, how effectively programs deliver instruction that provides students with those skills and competencies, how the programs assess the skills and competencies of their students and graduates, and what hinders the programs in their attempts to fulfill their responsibilities to their students.

The Academic Program Review Council, 2002-2003

Jack Buss, Arts and Sciences , Chair
Douglas Fonner, Arts and Sciences
Carrie Forbes, Library and Information Services
Michael P Keating, Optometry
Richard Kowalkoski, University College
Jim Mayhew, Allied Health Sciences
Connie L Morcom, Education and Human Services
Norwood "Woody" Neumann, Pharmacy
Dan Skurski, Technology
William Smith, Business
Randy Stein, Technology

Questions for APR Panel
AAS Degree in Automotive Service

Please list the primary skills, abilities, and knowledge base that you expect that a graduate of your program would possess.

Our primary skill sets are dictated by our NATEF (National Automotive Technicians Foundation Inc) certification body. The eight areas of certification are: 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, and A8 Engine Performance.

For each skill, ability or knowledge base listed above, identify the major component(s) of your curriculum that are designed to develop that characteristic in your graduate.

Our degree is broken down into the eight-certification areas. We have ten courses that cover the eight-certification areas. We also have two service floors that increase skill levels and assess the ability of the student to perform the eight-certification areas.

The charge of the Academic Program Review Council was to review the AAS Degree in Automotive Service. The rather lengthy document that the council reviewed seems to include considerable information concerning the Automotive Department, which is not in the purview of our charge. At various portions of the document, it was not always clear to the members of the council as to whether the data was for the program or for the department. As a consequence, the information requested in some of the questions that follow may have been answered in the document, but we would appreciate a reiteration of that information specifically as it relates to the AAS Degree in Automotive Service.

Who are the competitors that offer a comparable AAS Degree in Automotive Service in the State of Michigan?

Macomb and Delta Community Colleges are the only schools in the state that graduate any number of students. They do not present any threat to our enrollment. Our largest competitors are Northwestern University in Ohio and Universal Technical Institute. They have paid recruiters that go to every automotive program in the state of Michigan. The recruiter goes to every student's house at night and closes the sale.

In the introduction on pages, 1 and 2 ties with the "big three" automakers are described. The flow charts on pages 6 and 7 show these programs in relationship to a 4-year degree. The Curriculum Guide Sheet on page 155 indicates that an AAS degree is required for entry into the General Motors ASEP program. Please clarify the relationship between the GM-ASEP, the Ford-ASSET, and the Chrysler CAP programs and the AAS Degree in Automotive Service offered at Ferris State University.

The curriculum guide sheet on 155 has a mistake in it. This was caused by another academic decision being made by a staff person and not an academic person. The brochures used to be published for us. They changed the process and said, they would give us $100 per program to publish them. Then it went to $100 per college then the college was publishing them and now we are publishing them again. Because of a staff persons decision to transfer their budget cost to the academic programs there have been three different groups of people publishing the document. The net result has been obviously mistakes and transferring the cost to the programs. This is just one example of staff people trying to make academic decisions.

We have one auto service associate degree. The GM/ASEP, Ford/ASSET, and DaimlerChrysler/CAP are emphasis areas. All the course designators are the same, however we have separate sections for them, which is where we teach product specific information.

Please clarify the following sentence found on page 3. "Because of our industry ties, 50% of our students will be placed in jobs because of starting our auto service program." Also, please explain the meaning and implications of the sentence found in the next paragraph. "If an employer had to continually replace a Ferris graduate, then we would lose our employer base and have a very low placement rate."

To enroll in any of the corporate curriculums a student has to have a dealership sponsor. 98% of those sponsors are generally supplied through employer relationships with Ferris's Automotive Program. About 30% of Ferris's Automotive students are placed in corporate sponsored dealerships to attend Ferris State University every year. The other 20% per year are placed in internships in the comprehensive program.

On page 2 a decrease in department budget is mentioned, yet in the administrative report for the program found on page 294 the general fund S&E budget appears to have increased significantly in FY 2000 and 2001 when compared to FY97. In addition you appear to have received substantial Voc. Ed. Funds for the same time period. How serious a budget deficit is there for funding the Automotive Service program. Have any critical educational offerings been eliminated due to a lack of funding? Have you asked for increased funding through Unit Action Plans? On what basis do you make the statement that vocational education funds are anticipated to be lower in the near future?

The key word in the administration review is expenditures we were told to include everything we spend not what the university budgets for S&E. If you look at the $29,399 in 1997 this represents the amount from the University that was given to the auto service program for S&E money. From 1998 to 2002 those amounts include donated money that comes and goes from different companies and cannot be depended on. The real S&E from the university has actually gone down. We have been operating on a below 1998 budget five years later.

1997	*1998*	*1999*	*2000*	*2001*	*2002*
$29,399	*$34,926*	*$35,005*	*$33,631*	*$33,631*	*$33,631*

Not only has there not been an increase for inflation there has actually been a decrease. All cost have gone up for all material (see page 190) as can be seen I make no decision on S&E money because after the copies, and travel there is no money. As enrollment goes up our costs goes up. This is because we make more copies, phone calls to for prospective students as well as setting up internships, etc as enrollment goes up.

The travel cost goes up for two reasons. First, the motor pool raises it rates for mileages. Secondly, the amount of travel to internship sights is directly related to the number of students that you have going on internships. As a result of increasing enrollment you increase the number of internships. Thus increasing the cost to the program. There is no reason for a program to recruit more students. Recruiting cost the program for travel and if you enroll more students, then the cost goes up for travel to visit them on internships. The cost hits you twice and if they go on to a four-year degree the cost will hit you a third time for internships.

On the page that is numbered 5, 162, 185, 207, and 302, overloads for Auto Service faculty are mentioned. Please explain the formula that you use in determining a full load and in calculating an overload. How much of this overload time is the result of increased course offerings in the Automotive Service program and how much is the result of adding the BS degree in Automotive Service Technology and other changes that have occurred in the department? Are all of your lab codes filled? Is there a cap on enrollment? Do you have a waiting list? What is your actual attrition rate?

The formula is the same throughout the University by FFA contract. That is 12 credits or 18 contacts is a full load per semester and 24 credits or 36 contacts for the year. Anything over that is an overload and the faculty, part timers, and adjunct have to be paid according to the contract per lecture or lab class. So if you have 24 credits or 36 contacts over you have the equivalent of one full time faculty over.

As can be seen on pages 5,162,174 one can see that the enrollment has been increasing from our last review in 1996. Overloads are a ratio of faculty to students. We have had overloads for years, which can be seen on page 176. The AET just started in 2001. In the new AET BS degree two of the class were already being taught in a certificate. Therefore, we register the AET students first and if there are empty seats left, we allow people who want the certificate to enroll. Thus creating no faculty load. There were only two new courses created for the AET BS degree for a total of 8 credits. Those two new courses are in the senior year and will be offered in winter 2003. Thus the eight credits for one year in the AET program have not created the overload that exists today. Please refer back to the 1996 program review when we asked for a recommendation of expansion with 129 students. Now the program has a 160 in Auto Service and 57 more in AET for the increase of 90 new students. There are only three out of twenty BS programs that have over 90 students. One half of the College Of Technology departments (six) have only 90-100 students. Since 1996, the automotive department has increased as much as 6 of the other departments in the College of Technology. Yet, some of those departments have 50K for S&E budgets. Here is one example of not having administrative leadership in the College of Technology for over 10 years.

Program	*Fall 2002 Students*	*S&E Budget*
Printing	*104*	*$ 50,000*
Welding	*103*	*$ 50,000*
	207	*$100,000*
Auto Service & AET	*217*	*$ 33,000*
		-$67,000

There are departments/programs in the College of Technology that have lost enrollment of 100 students in the last 10 years and yet still have the same S&E, faculty resources, and equipment monies. With some departments increasing their enrollment by 100 while other departments are decreasing by 100 this causes over a 200-student shift between departments. Sense the majority of the departments in the College of Technology only average around 100 to a 125 students a 200-student shift is totally unacceptable in reference to resource allocations of S&E, equipment, and faculty.

Two full faculty overloads are either 48 credits or 72 contacts however; no one could expect the enrollment to grow at the rate that it is in the AET program. If that continues that will add more of an overload to the auto service faculty senior unit because they are the people who teach in the AET program, which uses AUTO designators.

For the lab sections full question please see SIS print out attached. This can also be seen on the productivity sheet 187 and the attached sheet of credits generated.

Yes there is a cap. We are a quota program, which can be seen on the quottec program on SIS. Our quota is 80 new freshmen a year. That would give us a max of 160 if we had no attrition.

If you look on pages 163 through 166 this information was supplied by Mitz Day in intuitional research. As can be seen on page 163 the university average on all two-year degrees persisters is 55 to 60%. The Auto Service program persister's rate goes from 73 to 90% with an average of 80%. This is one of the highest persisters rates in the university according to Mitz Day. With an extremely high rate of persisters multiply by one of the largest program enrollment results in a very high net gain for the university in # of students, dorm money, tuition and graduates for industry.

On the same page, it was indicated that three faculty were scheduled for retirement. What steps have been taken to replace these individuals?

All three-faculty positions were replaced in the fall of 2002.

Pages 169 and 174 also present enrollment data for the Automotive Service program. According to the data on page 169 there was a significant increase between 1994 and 1996, but after that the enrollment appears to follow a cyclic pattern. Are there 160 students currently enrolled this fall? On what basis do you make the projection of 170 for the fall of 2003?

Please see the SIS sheet for our fall 2002 freshman class.

On page 8, it is indicated that 150 surveys were sent out to graduates. When you are graduating approximately 50 students per year, why were so few surveys sent out?

The alumni office supplies all the mailing list. They set up surveys every other year such as 1,3,5,7,10 years out so you get different work experience. After five years their address become totally inaccurate. In 1996 we received almost no returns from year 7 and 10.

One of the student comments on page 17 expressed concern about downtime related to obtaining parts. Would you please comment on this?

This is a normal industrial process. When a vehicle is found to need a part we have to order it just like all other dealerships does. When a part supplier can supply the component we have over night service to the city of big rapids. However, if the component is a dealer supplied part they are only delivered twice a week on Tuesday and Thursday to the City of Big Rapids. All the service facilities have to work around the delivery system to the City of Big Rapids.

Please discuss the advantages to the student of receiving ASE certification. Why do you think that the numbers of students seeking this certification will continue to increase? See page 33.

It is mandated by the work place and our student groups of SAE/STS are starting to work on that as one of their projects.

Please explain the employer survey results on pages 37 to 39 in which, in many of the items, the percentages do not add up to 100. How do you interpret this data?

When we changed the format to vertical from horizontal for the report (book format) we lost a column. Please see the attached pages.

Approximately how many of the AAS students continue their education at Ferris after completing their degree? Is your BS degree in Automotive Engineering Technology attracting new students to Ferris or is it simply providing a different pathway for the AAS students who would remain at Ferris anyway?

According to a survey, our students were leaving Ferris State University after our AAS degree. This was also clearly demonstrated by a drop of enrollment in our AHM BS degree from 120 to 66 students. At the implementation of the new BS in AET (actually a year before in 2000 we increased auto service enrollment to 183) see page 162. This was done because of students staying at Ferris waiting for the AET designator. They were able to enroll because all of the junior classes were in place. The enrollment went from 162 to 183 to 195 to 220 in 2002. All the AET classes have AUTO designators and are taught by the AUTO faculty seniority group. Therefore, the S&E cost is to the Auto Service Program.

The AET program has brought in all new students. One of the complaints was that it was going to take students from the AHM program. However, if you refer to page 169 this is a list of the number of starting students (juniors for AHM). When we brought in 37 new students in AET in 2001 you will notice that AHM had it largest start year in eight years. Next if you look at the COT Fall 2001/2002 enrollment comparison handout you will see that AHM enrollment has increased again this year from 81 to 85 to 92 for an increase of 11 new students since we started the AET program. On the same sheet you can see we increased 57 new students in the AET program. That is a total of 68 new bachelor level students in our department. Only two new courses were created for the 57 new AET students! As can be seen on the hand out the AET program is already the sixth largest bachelor program in the COT out of 18 programs.

Please discuss the internship - coop opportunities for your students. How are they supervised? Please explain the statement on page 208 that every new student in the program requires additional internship visits by faculty.

Students are required to go on an Internship in the auto service program. In the corporate options they go on four coops. Two over summers and two over our Christmas breaks over the two years.

The travel cost goes up for two reasons. First, the motor pool raises it rates for mileages. Secondly, the amount of travel to internship sights is directly related to the number of students that you have going on internships. As a result of increasing enrollment you increase the number of internships. Thus increasing the cost to the program.

The Auto Service faculty seniority group teaches the classes taught in the AET program. The internship in the AET program for this summer semester will add travel cost to the S&E budget.

On page, 205 you mention that the building should be replaced. Please expand on the basis of this conclusion.

Our building is one of the oldest on campus it was built in 1956. The auto service program was started in 1952 with 20 students and one teacher. The auto program and department has one of the most sustained enrollment growth in the College of Technology and University with the total of 349 students. With the projected growth of the AET program, which will also attract new freshman to the Auto Service program will increase the demand on the facilities. At the present time, we offer classes until 10:30 pm four nights a week.

The AC building use to house the whole College of Technology and skill trades personal. Thus, the building was not designed for automotive programs. Most of the lab rooms are what we refer to as component rooms. Which means no vehicles can be brought into these labs. That use to work for us until about 1987 when the advent of computer controlled vehicles. With all the inner connected electrical systems on the vehicles, we have been forced to use vehicles for lab classes. As a result, we need labs that we can bring vehicles into. We had only one lab room AC 112 that we call the multipurpose room because we can bring vehicles in the lab. The skill trades people moved out of our building, we gained another lab that we can bring in vehicles, and we call it the brakes and alignment lab room AC 106. This means we have two lab classrooms that we can bring vehicles in for fifty lab classes that are scheduled each semester. We took space off the back of the service floor by installing a door and we made another lab for the Ford Asset program room AC 118F. I also schedule two classes in the afternoons in the service floor isle ways at the same time. The service floor runs during the morning, which allows me to use the isle ways as a lab. This is not a good teaching situation to run two different classes in the same space. Further, more some of the customers vehicles tend to get damaged on the service floor. We reallocated space from the auto body program in room AC 129. Auto body classes and auto service classes running at the same time-share the room. Again not a very good educational system. Presently we have three multipurpose lab classrooms room AC 106, 112, and 118F for fifty lab classes scheduled this semester.

The University's number one goal is enrollment growth. The auto programs can still maintain growth in recent years I have closed off auto services enrollment two times this year we enrolled 85 for 80 seats. With our largest competitor, Universal Technical Institute building two new automotive facilities in the Detroit area it is just a matter of time before enrollment is effected. Universal Technical Institute also built a $20,000,000 building with NASCAR this last year and they expect to enroll 2,000 students per year. They have many full time paid recruiters with specialized target areas in Michigan. Ferris was offered NASCAR first, but our administration turned it down. Thus losing 2,000 students to the university plus whatever the new facilities in Detroit take away from us.

Ferris State University

College of Technology

Automotive Department

Program Review

Of The

Associate in Automotive Service Technology

2001-2002

Program Review Panel

Gregory W. Key (chair) Professor Automotive Department Chair

Peter H. Alley Associate Professor Automotive Department

Rexford D. Billings Associate Professor Automotive Department

Benjamin Q. Upham Assistant Professor Automotive Department

Thomas H. Brownell Professor Languages and Literature Department

Donald Walcheski Advisory Committee

April 30, 2002

INDEX

SECTION 1

AUTO SERVICE PROGRAM REVIEW

Introduction:

From the Automotive Service Program the Department of Automotive and Heavy Equipment was developed. The Automotive Department consists of four programs: Automotive Body, Automotive Service, Automotive and Heavy Equipment Management and the newest degree Automotive Engineering Technology that is a Bachelor of Science degree. The Automotive and Heavy Equipment Management Bachelor of Science degree was the first BS degree in the College of Technology. To this day, it graduates one of the highest numbers of BS graduates in the College of Technology.

The Automotive Service Program has the largest number of students and the largest number of faculty in the department. Therefore, the Automotive Service Program is very significant part of the Automotive Department.

To help compete with other schools, Ferris's Automotive Service Program began making ties with the major automotive manufacturers. In 1988, the Automotive Service Program at Ferris State University along with General Motors started a GM-ASEP program. We receive approximately $200,000 per year in vehicle donations alone, plus training materials, equipment, manuals, engines, tools and faculty update training. After we were able to start a new group of students every year in GM-ASEP, we started working with Ford Motor Company on a Ford-ASSET program.

In 1991, we started the first group of students in the ASSET program. Ford donated all training materials and all of their specialty tools; most of which no school would be able to afford to purchase since they change with every model and year, and their life span is sometimes

only one year. In the summer of 1996, we started the Chrysler CAP program. Since we did not receive official notice from Chrysler until late summer, we were not able to advertise the program very effectively for a fall start up date. Because of the late date, most seniors had already enrolled in a college. Even with such a short notice, we were able to start a small group in the fall of 1996. With the start of the next cycle of the Chrysler CAP program, we were able to start a full group of students.

Our department budget in previous years was $80,000. That amount has been lowered over the past few years to around $50,000 for the last two years we have remain the same $50,000 with inflation being 2.8% per year. However, the cost of all materials and equipment in the department has increased extensively in the past ten years. Vocational education funds are anticipated to be lower in the near future.

We presently maintain approximately 80 new donated vehicles for educational purposes, which we rotate every three to five years. The value of the 80 vehicles is approximately 1.5 million dollars.

With our donations of vehicles and other equipment and training from industry, we receive around 2 to 2.5 million dollars of donations every three to five years on a continuing rational basis. As can be seen; the quality of the Automotive Service Program is financially linked to industry. Around 70% to 90% of the money for equipment it takes to run the Automotive Service Program comes from industry. With the high probability of the vocational funds being eliminated in the near future, the need for a strong tie to industry will be essential for any program at Ferris to be competitive.

Students receive some books free from industry, which are the latest books available; thus lowering the cost of education for the students. Furthermore, because our faculty continue to

go to corporate training, the companies have allowed us to imbed their training courses into our Automotive Service Program. This gives the students about $35,000 worth of training courses when they graduate. They get to take their training history with them to the dealership, which means that the dealership doesn't have to pay $35,000 for them to go to the training center. This along with the high quality education they receive at Ferris makes our students in very high demand.

Placement in the Automotive Service area is 100%. Some choose to go on to our Automotive Engineering Technology, Automotive and Heavy Equipment Management, Small Business Management, Teacher Education and pursue a Bachelor Science degree. In our three corporate automotive service options, we help arrange co-op dealership sponsors for our students. Because of our industry ties, 50% of our students will be placed in jobs because of starting our auto service program.

Employers are evaluating approximately 50-75% of our students over a two-year period while they attend Ferris. This is the best outside assessment available to any program. If an employer had to continually replace a Ferris graduate, then we would lose our employer base and have a very low placement rate. The corporate programs allow for around 50 to 80 different employers every two years to evaluate Ferris's Automotive Service Program. As a result, the employers are willing to hire co-op students when they start the Automotive Service Program with just the intent to finish the program. This speaks to the quality and reputation of the Automotive Service Program at Ferris State University.

In the near future, we anticipate losing three automotive service faculty for fall 2002 to retirement and their positions will need to be filled at that time. With the freshmen enrollment, increase expected as a result of our new Automotive Engineering Technology program, in the

next two years, the program should remain the largest program in the department. All indications point to a slow steady growth in the Automotive Service Program in the next few years. See Next Page.

Auto Service Overloads

2000-2001	1.47	Actual
2001-2002	2.14	Projected
2001-2002	2.16	Actual
2002-2003	2.5	Projected

2002

Gary Gage: One year temp last 4-5 years.
Overload: Were lower in 2002 because of moving Vic Fowler to cover auto service classes
Mike Hachman: 3 Credits Over
Bill Wagner: 2 Credits Over
Ron Tuuri: 3 Credits Over

	Faculty/Staff	**Faculty/Load**	**Overload**	
	Gary Gage	17/45	19/39	
Auto Body Faculty	Vic Fowler	18/30	18/30	Overload not paid... internal transfer, but will need to be paid next year because of Gary Edgerly retirement.
	Mike Hachman	15/39	3/0	
	Bill Wagner	26/36	0/6	
	Ron Tuuri	23/39	0/3	
			40/78 = 2.16 Overloads	

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.
Based on the enrollment trends for the last six years for Auto Body and Auto Service my suggestion would be to run the Auto Body program with two faculty instead of three and transfer Gary Edgerly's position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the program will still have the highest overloads in the College of Technology.

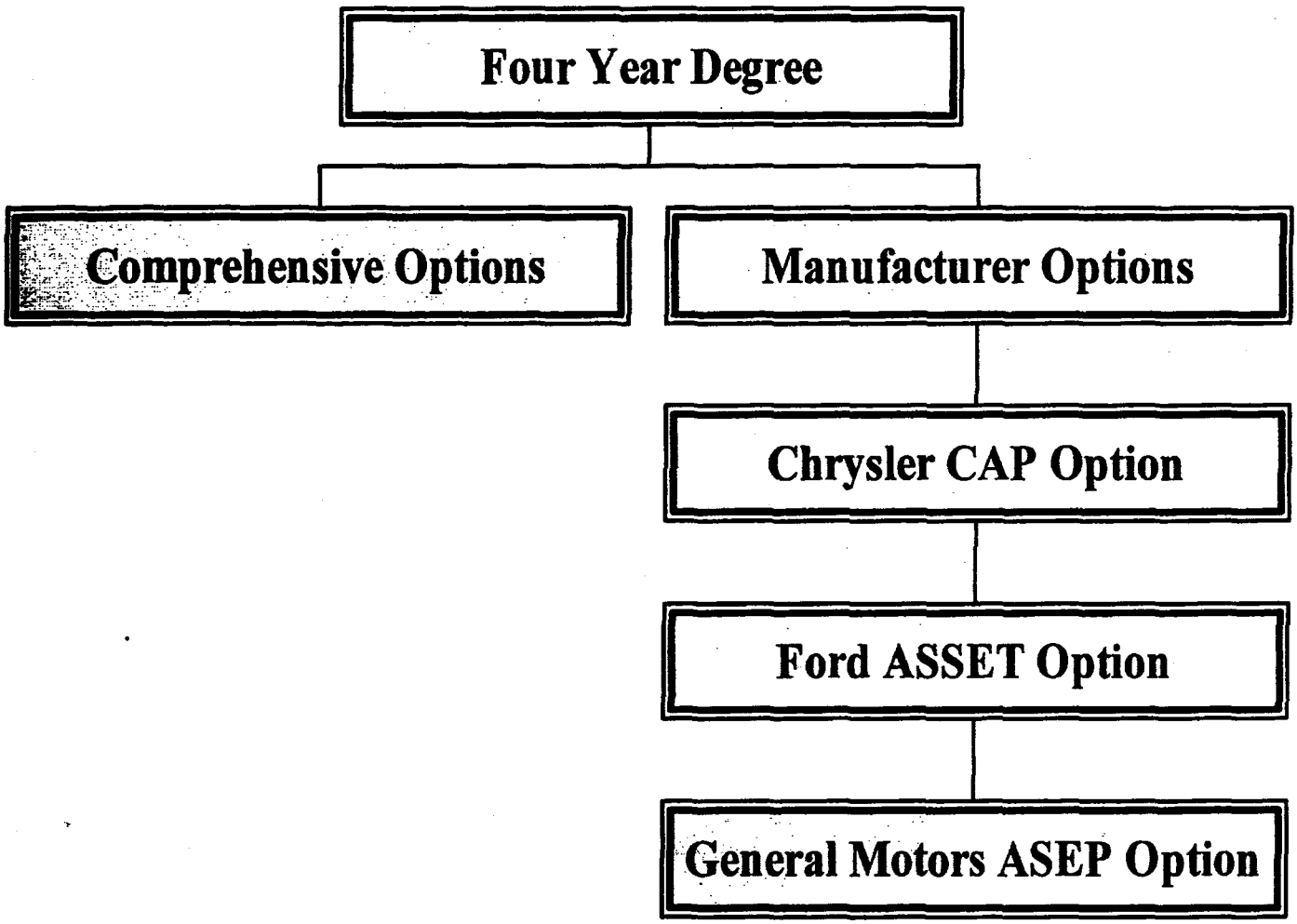
Program	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

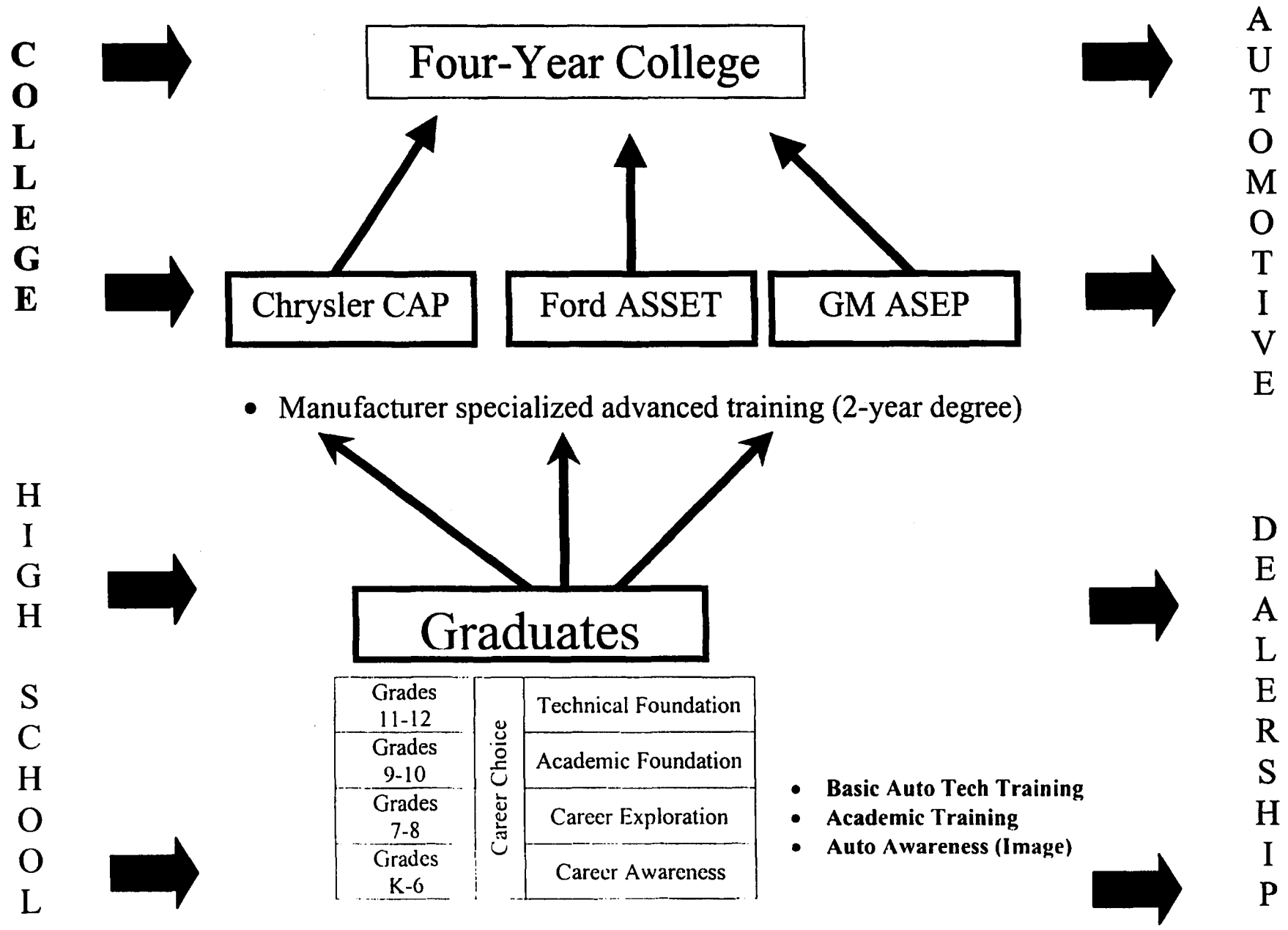
Will need to replace all three positions:

Faculty Name	**Position**	**Date Retiring**
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

Automotive Service Program



Automotive Youth Educational Systems



SECTION 2

SUMMARY: ALUMNI SURVEY OF GRADUATES

Introduction:

The alumni survey was mailed to 150 Automotive Service Program graduates asking them how successful the Automotive Service Program was in preparing them for their technical career. The survey contained 14 questions. 36 of those surveyed responded. The majority of the responses came from graduates that have worked for their current employer three years or less.

Results:

36 responses from a mailing of 150 represent a sampling of 24%.

There is a brief summary after each question where appropriate.

Questions 1 – 5 asked for employment background and salary information.

Questions 6 – 11 sought data on the respondent's job placement and preparation for their careers.

Questions 12 & 13 asked about facilities and equipment.

Question 14 surveyed the respondent's likelihood to return to Ferris for a Bachelors Degree.

At the end of the survey respondents were asked to rate individual subject areas based on their relevance to their work

There is one respondent's comment about the program in general.

Survey Responses:

Following are the questions asked in the survey and all of the responses given.

Ferris State University
Automotive Service Program
Alumni Survey of Graduates

2002 Results

Question 1: Where are you currently working?

- Planet Power Sports, 647 East Chicago Road, Coldwater MI
- Bob Saks Dodge, 35200 Grand river, Farmington Hills MI 48335
- Fashion Retail
- Protech Automotive Service LLC, 60 West 64th Street, Holland MI 49423
- International Engine Division, 10400 West North Avenue, Department 392
- Parker Pontiac/Buick/GMC, Alma MI
- Toyota Motor Sales, 19001 Vestern Street, Torrance CA
- Automotive Teacher, Petoskey Public Schools, 1500 Hill Street, Petoskey MI 49770, 231-348-2193
- Autodie International, 44 Coldbrook NW, Grand Rapids
- Owner Lakeside Auto, 802.5 US 41 South, Baraga MI
- Dykstras Auto Service, 3590 Chicago Drive, Hudsonville MI 49426
- Valley Truck Parts, 1900 Chicago Drive, Grandville MI
- Bud Kouts Chevy, 2801 East Michigan
- Gettel Auto Mall, 651 South Unionville Rd, Sebewaing MI 48759
- Ford Motor Company, Plymouth, Middlebelt Livonia
- City of Mt. Pleasant, 1303 North Franklin Street, Mt Pleasant MI 48858
- General Motors, 4100 South Saginaw Street, Flint MI 48507
- Dick Scott Motor Mall, 3030 Fowlerville Rd, Fowlerville MI 48836
- University Chevy, Big Rapids MI 49307
- GM Pontiac Truck Center, 1999 Centerpoint Parkway, Pontiac MI 48341
- Daimler Chrysler
- Jaguar of Troy, 1815 Maple Lawn, Troy MI 48084
- General Motors Power Train, 1001 Woodside Ave, Bay City MI 48708
- Bergmann Marine, 05953 Lob Rd, Charlevoix MI 49720
- Bergstrom Automotive
- General Motors Cadillac Plant, 920 Townsend Rd, Lansing MI
- Benchley Brothers, 821 E 5th Street, Clare MI 48617
- Tillema Sales & Service, 2667 84th Street, Bryon Center MI
- Delphi, Brighton MI
- Daimler Chrysler, 800 Chrysler Drive East, CIMS 481-00-35, Auburn Hills MI 48326
- Annie Rea Chevrolet, 10200 US 27 North
- Pres Kool Chevrolet, 1748 West Grand River, Okemos MI

Question 2: How long have you been employed there?

7 yrs	4 yrs	2 yrs	6 months	2.5 yrs	1 yrs
1 yrs	4 yrs	4 yrs	2 yrs	7 yrs	3.5 yrs
3 yrs	9 yrs	1 yrs	2 yrs	2 yrs	3 yrs
2.5 yrs	2 yrs	1.5 yrs	4 months	2 yrs	1 yrs
1.5 yrs	1.5 yrs	3 months	5 yrs	10 months	2.5 yrs
2 yrs	8 yrs	3 yrs			

Question 3: What is your present position/job title?

- Mechanic
- Technician
- Team Leader
- Owner
- Assistant Manager
- Field Server Manager
- Corporate Trainee
- Automotive Instructor
- Robotics Specialist
- Driveline Mechanic
- Driveability/HVAC Technician
- Phone Analyst
- Motor Pool Mechanic
- Release Engineer
- Technician (Heavy and Trans)
- Service Advisor
- Service Engineer, Exterior Closures
- Senior Staff
- Jaguar Technician
- Supervisor, Education & Training
- Parts Manager
- Production Supervisor
- Truck Mechanic
- Lab Technician
- Technical Trainer

Question 4: What was your starting salary?

Hourly		Salaries	
9.00	7.00	50k	31k
6.00	8.50	42,500	29,994
13.00	11.00	42k	30k
19.50	16.50	24k	36k
16.00	9.50	34k	60k
17.75	5.25	27,040	40k
15.00		51,840	20k
		32,000	36,000

The average starting hourly rate for employees is $12.82.
The average starting salary for employees is $37,282.84.

Question 5: What is your present salary?

Hourly		Salaries	
12.00	8.25	65k	33k
14.00	17.85	54k	37,263
20.00	18.75	52k	60k
19.50	17.00	80k	32k
9.50	23.20	52k	38k
18.00	16.75	800/month	44k
		63k	28,080
		45k	56,800
		26k	35k
		38,500	

The average present hourly wage is $16.96 and the average present salary is $46,428.58.

Question 6: Was it difficult to find a job when you graduated?
Reponses: YES 4 NO 32

11% of our previous graduates feel that is was difficult to find a job while 89% found it easy to find a job. A large amount of those graduates had job lined up before graduation of their program.

Comments By Graduates That Stated Yes For Question 6:

**With the experience I got at Ferris, I found many areas of work I could have chosen.*

**Soon after graduation from AHM, the economy started to fail. New opportunities are starting to surface through with the economy on upswing.*

Comments By Graduates That Stated No For Question 6:

**I also have a BS in AHM. Employers were happy to see a mix of technical skills and managerial skills.*

**The economy was good offers were turned down.*

**Who wants to hire a girl!*

**I was able to stay at the dealership that I was employed at during my internship. Since then, I have changed dealerships to current employer.*

**They recruited me, I student taught with the old instructor then was hired for his position when he retired.*

**Continued and co-op; Co-op was the most valuable when employed at the dealer. Courses were most valuable for my present job.*

**Good techs are hard to find*

**I worked at Gettels during ASEP program and they hired me full time after I graduated.*

**I was part of the Ford ASSET program. I had a job waiting for me at Krophol Ford.*

**It was hard with many interviews and not having real world experience before finding a job. Also because needing to be in class everyday hard to find time for interviews. Should see about having dealerships at job fair or on campus interviews. I interviewed with Rockwell Automotive while in my last year of AHM and was offered a position before graduation.*

**The program has a good reputation in the field. It really helps getting a foot into the door having FSU on your resume.*
**Upon graduation in the ASEP program, I had a job at Seif & Sons Chevrolet. After being laid off last February, my previous foreman found me a job at my current location.*

Question 7: Which phase of your on-campus education (courses, service floor, or co-op) was most valuable in preparing you for work?

Comments By Graduates for Question 7:

*The hands-on in the labs and co-op at my dealership.

**The co-op experience was definitely the most valuable in preparing me for the real work situations I would encounter.*

**As a lone woman, you can't change the status quo.*

**The lab situation was very helpful, but being able to actually work at a dealership while being educated was the most beneficial. Actually, doing work and applying what you've learned in the classroom is the best way to learn in my opinion.*

**They all played an important role*

**Courses and co-op were the best reading and learning to understand what was read is a major must.*

**It all helped. I worked on trucks so thing are different than autos.*

**Hands on learning works best for me. Working with the instructors during lab time was most productive. Actual time spent at the dealership was also very important.*

**I fell my co-op with CAP definitely gave me a leg up. It's been a hiring point ever since.*

**The co-op was by far the most valuable. You get practical experience on current technology*

**All automotive related courses and service floor.*

**Co-op much more educational than service floor.*

**Courses and Service Floor*

**Service Floor was were I learned the most but I could see where co-op would be helpful as to see what you would expect and be expected of in a dealership setting.*

**I believe the total experience proved valuable.*
**I came back to college at 24 years old, so I already had work experience as a technician but I didn't have all the physics and theory stuff. If you can grasp that stuff, you can apply it to a lot of things.*

Question 8: Based on your course work at Ferris, were you able to obtain ASE/Michigan certification in all 8 areas? If not, please explain the area of concern.

Reponses: YES 23 NO 14

62% of our graduates were able to obtain their ASE/Michigan certifications following completion of our Automotive Service Technology program, while 38% where unable to obtain them. Part of that 38% chose not to take their certification exams do to jobs not requiring it and the factor of time.

Comments By Graduates That Stated No For Question 8:
**No, other than a few, I have passed all the tests I have taken. Being real busy at work and just plain forgetting about the tests, dates have hindered me in being certified in all 8 areas.*

**No, not enough preparation I feel more job experience would help. I passed 2 ASE tests a year after I obtained my associate degree.*

Comments By Graduates That Stated Yes For Question 8:
**I can also employed in the summer at Tallberg Chevy Oldsmobile Cadillac in Petoskey as an Automotive Technician.*

**I did not stay in profession long enough.*

**Change of plans working on trucks and not cars.*

**I was able to easily obtain master automobile and master heavy truck.*

**I did take and pass a few, however I lacked in the 2 years of experience. Ferris counted, as 1 year and I did not have the other year.*

**Brakes, Engine, A/C*

**Some areas of study did not examine closely enough or explain in very good detail.*

**Didn't need for job responsible*

**My ac class was a major joke; professor knew less than I did.*

**I have taken a few ASE tests. I passed the ones I took*

Question 9: How effective was your course work in preparing you for work?
Reponses:

23 Effective 10 Some What Effective 1 Not Effective

68% feel the course work was effective in preparing them for work in the field of Automotive Service Technology. 29% feel it was somewhat effective and 3 % feel it was not effective at all.

Should any changes be made?

**More emphasis should be placed on auto manufactures outside US. Course work was to bias towards the "Big Three".*

**More hands on. Not enough time spent working on the Service Floor.*

**Don't waste time on obsolete systems and make the student read until they can't read. Being able to understand how a system works is a must.*

**Antilock brakes. When I graduated in 1994, which are not used anymore. The was not much in the class about antilock brakes, which everything has now. That is really the only thing. I ran into in the field was my limited knowledge of ABS.*

**Teachers should have 1 or 2 months of dealer experience per year or 3 months every other there was several "old school" things taught and should have involvement that is more real.*

**Needed more current model year vehicles for labs. Technology changes so a lab vehicle that's 4-5 years old is outdated.*

**Change course structure to include engineering aspects*

**It seems like a lot of time was focused on thing not needed. Such as the inner parts of starters and alternators. I have never rebuilt either one of these and to study the inner parts of one, as if we were to rebuild them, was a waste of time. Same with steering racks and brake calipers.*

**Auto Students should be required to take a course in welding.*

**Could have used a course in automotive diesel's and in light duty trucks.*

Although extremely thorough, my experience is Detroit's work force says there are engineers and their technicians. The industry is Highly lacking in techs that have engineering experience. With the Big changing from "being managed correctly" to "Quality Driven", more practical engineering in real world situations is needed badly. Right now there are engineers who don't know how a car works while there are techs who've never read blueprints.

Ferris makes all resources available for students to excel in all areas. I think the biggest problem is that mom & dad pay for a large portion of most student tuition, and they don't appreciate what's offered to them because they themselves have nothing invested.

Not so much time spent on rebuilding starters, alternators, wheel cylinder, calipers etc. No one rebuilds that shit you just replace it use that time for diag tips.

All classes need to have more work on vehicles. More R&R of parts and lots more training on the scan tool.

No, courses were very good!

Explain how to better study for ASE's maybe spend less time on measuring tolerence. Never really used with warranty in dealerships. In after market situations I could see where it would be useful if engine assembly were a main factor.

Getting to know the manuals and components was the biggest help. Maybe you could have a class on finding a "good" employer. There are plenty of bad employers in this field; I've run across a couple now I work on boats.

In the ASEP program, I noticed a few students not receiving the guidance at the dealerships that others were. Back in 1996 while I attended, the most educational portion was out in the field. The classroom built a solid foundation to build the experience.

Yes, the engines class should really focus on more on practical jobs. Very few dealerships/repair facilities do complete engine jobs. Now a day it is replace the whole assembly.

Question 10: How effective was your service floor experience in preparing you for work?

Reponses:

12 Effective 2 Some What Effective 4 Not Effective

67% feel that the service floor experience was good for preparing them for real world experience, while 11% feel it was somewhat effective and 18% fell it was not effective at all.

Should any changes be made?

**Out of school, co-ops are very helpful on the floor experience at school it moves too slowly.*

**Not realistic. Teacher student relationship is poor.*

**I had lab sessions with hands on learning. The sessions were very helpful. They were not held on the service floor, but in classrooms.*

**It would be very effective if I wrenched for a living.*

**Yes, I think students should have to do one semester on service floor and one semester on an internship.*

**Types of jobs involved I know you may not be able to do this but getting parts for vehicles faster spent a lot of down time waiting on parts.*

**My parents had a Cadillac with multiple codes. I learned more about troubleshooting on that car than any other service floor projects. Any monkey can change brakes and shocks. I think the more abstract jobs that make you think are the one that pay off.*

**All foreign makes*

Question 11: How effective was your co-op experience in preparing you for work?

Reponses:

10 Effective 2 Some What Effective 4 Not Effective

62% Effective
13% Some What Effective
25% Not Effective

Should any changes be made?

**More follow up on the productivity of the student at the dealership on FSU part. I felt that my sponsoring dealership took advantage of me once I was in the program. I am no longer employed there.*

**The dealers need to have a clear understanding on how the program's work and what the student's responsibilities are.*

**Yes, everyone should have to do one.*

**It gave me hands on experience that was more effective than most of the class work.*

Question 12: Was the technological equipment used in your courses and service work up to date?

**Yes, but it changes fast students should be up to date for basic windows skills.*

**Yes, OBDII was just coming out when I graduated. The instructors where being trained and equipment was coming in.*

**Yes, for the models that were out at that time.*

**Yes, had information available and equipment need for fixing vehicle properly.*

No, many advances since I graduated.

Question 13: Are the computers you used and the computer skills you developed in the program useful on the job?

**No, location I would have to be in the area to run my business.*

**Yes, they are and were very helpful. Today I would hope that FS would stress computer skills even more. 90% of my work is done at the dealership involves computers.*

**Yes, computers can be very useful for diagnostics and in everyday use as long as they don't crash or lockup.*

**Yes, a little bit out of date. I think you guys updated them after I went thru.*

**No, don't really recall using computers much when I was there*

**Some of them, when writing warranty strategies and for customer info.*

**Yes, but anymore the kids coming into the program probably have more computer skills than I do.*

Question 14: If you were to return to school for a Bachelor's degree, would you consider Ferris?

Please explain:

**Yes, Ferris, from what I've seen in the dealership work...is very known for producing excellent workers.*

**Yes, it was a great experience.*

**I enjoyed the classes. The instructors were interactive with all students. I have also encouraged high school students who are interested in automotive repair to go to Ferris.*

**Yes, graduated from AHM in 2000.*

**Yes, I believe Ferris is a class institution with very knowledgeable instructors. I wouldn't have second thoughts about attending Ferris.*

**I did get my Bachelor's degree from Ferris. I went through the AHM program. Graduated in 1996.*

**Would return due to the amount of info learned and teaching methods but no because of location. Should offer classes in local college to better assist in getting bachelors while still being able to work and make money for a living.*

**I completed AHM in May and am totally happy with my dreams to attend Ferris. I was sorry to see the Tech of the Future Day canceled. That was the reason I came to Ferris.*

**If I return to school, it will be part-time while I work so Ferris is not an option since it's too far away. If I were going to go back to school full-time then yes, I would consider Ferris.*

**I did, Ferris AHM program is one of the few automotive management programs in the country, and is very timely and relevant to the real world.*
**Yes, because of the school's recognition and staff. The management course is the best I have seen so far.*

**The main reason that I would consider returning is so I wouldn't lose all of my automotive classes credits.*

AUTO SERVICE PROGRAM RELATIVE TO YOUR WORK

Question: Please rate the relevance of the subject areas that you studied in the Auto Service Program to your work.

	Highly Relevant	Relevant	Some What Relevant	Not Relevant
Front/Rear Wheel Alignment	56%	24%	8%	12%
Wheel Balancing	43%	26%	17%	14%
Major Brake Service	61%	21%	9%	9%
Anti Lock Brake Systems	63%	17%	9%	11%
Power Steering Systems	47%	29%	15%	9%
Front Wheel Drive Manual Systems	33%	21%	30%	16%
Front Wheel Drive Automatic Systems	41%	29%	15%	15%
Rear Wheel Drive Manual Systems	42%	24%	21%	13%
Major Engine Service	50%	26%	12%	12%
Minor Engine Service	59%	30%	3%	8%
Electrical And Electronic Fundamentals	82%	12%	3%	3%
Ignition, Starting & Charging Systems	81%	13%	0%	6%
Fuel Injection Systems	72%	19%	0%	9%
Emission Systems	60%	30%	0%	10%
Chassis Electrical Circuits	80%	12%	3%	5%
Computerized Electrical Systems	85%	9%	0%	6%
Automotive Air Conditioning	47%	29%	9%	15%
Hazardous Materials	30%	30%	25%	16%
Personal Protection Equipment	30%	36%	25%	9%
Technician Certificate	59%	26%	6%	9%
Customer Relations	56%	24%	9%	11%
Job Seeking Skills	47%	29%	12%	12%
Co-Op Work Experience	60%	13%	7%	20%
Service Floor Experience	51%	19%	0%	23%
	56%	24%	8%	12%

AUTO SERVICE PROGRAM RELATIVE TO YOUR WORK

Question: Please rate the relevance of the subject areas that you studied in the Auto Service Program to your work.

	Highly Relevant	Relevant	Some What Relevant	Not Relevant
Front/Rear Wheel Alignment	19	8	3	4
Wheel Balancing	15	9	6	5
Major Brake Service	21	7	3	3
Anti Lock Brake Systems	22	6	3	4
Power Steering Systems	16	10	5	3
Front Wheel Drive Manual Systems	11	7	10	5
Front Wheel Drive Automatic Systems	14	10	5	5
Rear Wheel Drive Manual Systems	14	8	7	4
Major Engine Service	17	9	4	4
Minor Engine Service	20	10	1	3
Electrical And Electronic Fundamentals	27	4	1	1
Ignition, Starting & Charging Systems	26	4	0	2
Fuel Injection Systems	23	6	0	3
Emission Systems	18	9	0	3
Chassis Electrical Circuits	27	4	1	2
Computerized Electrical Systems	29	3	0	2
Automotive Air Conditioning	16	10	3	5
Hazardous Materials	10	10	8	5
Personal Protection Equipment	10	12	8	3
Technician Certificate	20	9	2	3
Customer Relations	19	8	3	4
Job Seeking Skills	16	10	4	4
Co-Op Work Experience	18	4	2	6
Service Floor Experience	18	6	0	7

Comments Stated By Graduates For Related To Work Survey:

**When I worked on cars, all of this stuff was relevant. Now in the marine industry, anything related to the engine or electrical system is highly relevant.*

**The best part is the teachers taught us how to learn these things on our own.*

**After obtaining my degree it was obvious that I needed more training in scan tool operation and drive ability problems.*

**All of these areas are very important in the work place. Keep up the good work "Automotive Service Program"!*

**When employed at the dealership all courses were very important. I had a much larger range of knowledge because of the courses. This really showed when I compared myself to someone that had only worked in the dealership or had a "specialty". Most techs seemed afraid to venture into an unknown area, but having the ASEP background made new areas exciting.*

November 27, 2001

Dear Ferris State University Alumnus:

All programs at Ferris State University are reviewed every few years. Part of the review process includes an Alumni Review.

The Ferris State University Automotive Service Technology program faculty endeavors to provide a high quality two-year automotive service degree. To be able to determine the effectiveness of our program and to meet present and future needs, we need your assistance and input. Please complete the enclosed survey and return it in the enclosed self-addressed stamped envelope.

Your time and effort is greatly appreciated and is important to this process. If you have any questions please call Greg Key, Department Chair, Automotive Department at (231) 591-5981.

Sincerely,

Greg Key
Automotive Service Technology

GK: km

Enclosure: Alumni Survey

Ferris State University
Automotive Service Program
Survey of Graduates

1. Where are you currently working? _____
   Address: _____

2. How long have you been employed there? _____

3. What is your present position/job title? _____

4. What was your starting salary? $_____

5. What is your present salary? $_____

6. Was it difficult to find a job when you graduated? YES_____ NO_____
   Explain:

7. Which phase of your on-campus education (courses, service floor, or co-op) was most valuable in preparing you for work?

8. Based on your course work at Ferris, were you able to obtain ASE/Michigan certification in all 8 areas? YES_____ NO _____
   If not, please explain the area of concern.

9. How effective was your course work in preparing you for work?

   ☐ Effective ☐ Some What Effective ☐ Not Effective

   Should any changes be made?

10. How effective was your service floor experience in preparing you for work?

☐ Effective ☐ Some What Effective ☐ Not Effective

Should any changes be made?

11. How effective was your co-op experience in preparing you for work?

☐ Effective ☐ Some What Effective ☐ Not Effective

Should any changes be made?

12. Was the technological equipment used in your courses and service work up to date?

13. Are the computers you used and the computer skills you developed in the program useful on the job?

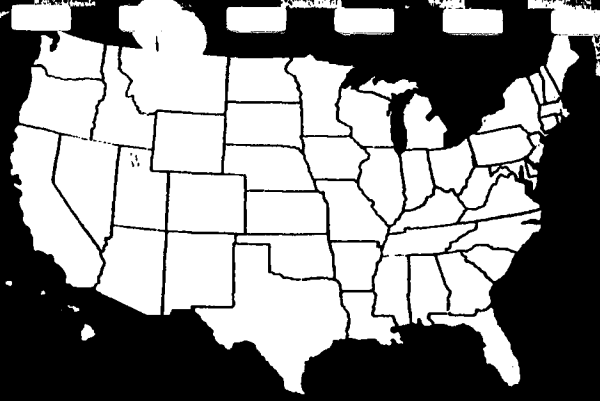
14. If you were to return to school for a Bachelor's degree, would you consider Ferris?

Please explain:

AUTO SERVICE PROGRAM RELATIVE TO YOUR WORK

Question: Please rate the relevance of the subject areas that you studied in the Auto Service Program to your work.

	Highly Relevant	Relevant	Some What Relevant	Not Relevant
Front/Rear Wheel Alignment				
Wheel Balancing				
Major Brake Service				
Anti Lock Brake Systems				
Power Steering Systems				
Front Wheel Drive Manual Systems				
Front Wheel Drive Automatic Systems				
Rear Wheel Drive Manual Systems				
Major Engine Service				
Minor Engine Service				
Electrical And Electronic Fundamentals				
Ignition, Starting & Charging Systems				
Fuel Injection Systems				
Emission Systems				
Chassis Electrical Circuits				
Computerized Electrical Systems				
Automotive Air Conditioning				
Hazardous Materials				
Personal Protection Equipment				
Technician Certificate				
Customer Relations				
Job Seeking Skills				
Co-Op Work Experience				
Service Floor Experience				



Program Locations

Glendale Community College

Cerritos College
Miramar College
DeAnza College

Arapahoe Community College

Sheridan Technical Center
Pinellas Tech Education Center

Gwinnett Technical Institute

Honolulu Community College

Moraine Valley Community College

Des Moines Area Community College

Massachusetts Bay Technology Center

Ferris State University
Macomb Community College

Northwest Mississippi Community College

Hennepin Tech. College

Louisiana Tech College

Southeast Community College

Mercer Community College

New Hampshire Tech. College

Rockland Community College
Erie Community College
Hudson Valley Community College

Central Peidmont Community College

Sinclair Community College

Oklahoma State University

Mt. Hood Community College

Northampton Community College
Community College of Allegheny County

Houston Community College
Tarrant County College

Weber State University

Shoreline Community College

Milwaukee Area Technical College

Want To Know More?
Contact Us At:

www.cap.daimlerchrysler.com
1-800-626-1523

or send your name, address, and phone number to:

National CAP Headquarters
Technical Training
2367 Walton Blvd
Auburn Hills, MI 48326

81-699-01081 5M 8/01

COLLEGE AUTOMOTIVE PROGRAM

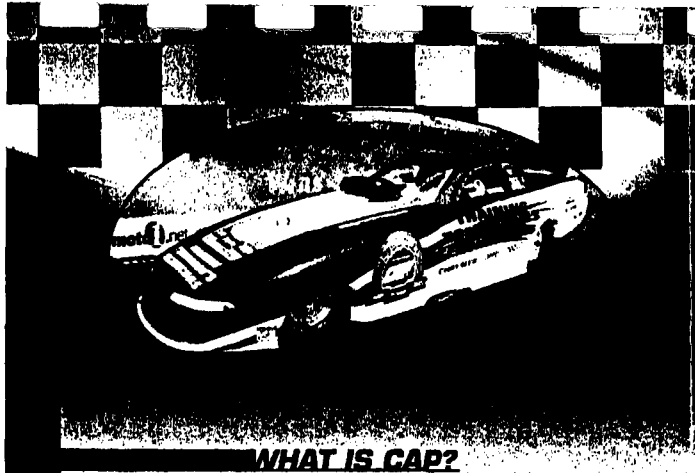
DaimlerChrysler

CAP

Dodge Chrysler Jeep

Training Tomorrow's Technicians

TRAINING TOMORROW'S TECHNICIANS



WHAT IS CAP?

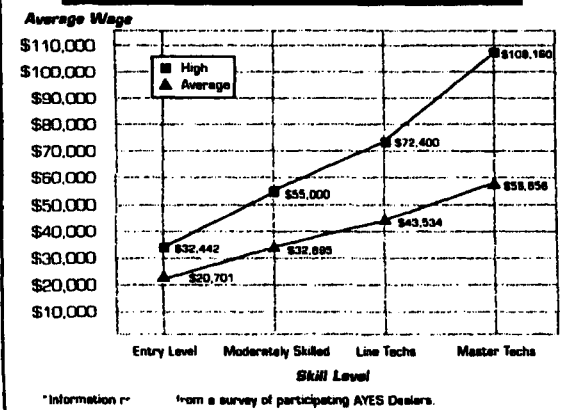
The College Automotive Program (CAP) is a nationwide effort to train and employ the industry's best automotive technicians. CAP seeks to attract top talent by offering the following benefits:

HIGH-QUALITY AUTOMOTIVE EDUCATION

CAP colleges are certified by the National Institute for Automotive Service Excellence/National Automotive Technicians Education Foundation (ASE/NATEF). Every CAP instructor is a DaimlerChrysler-trained, experienced professional.

DaimlerChrysler provides the latest vehicles, components, and instructional materials. It also provides high-tech tools, including diagnostic equipment, for hands-on training.

WHAT DO TECHNICIANS EARN?



*Information r... from a survey of participating AYES Dealers.

REAL-WORLD TRAINING

CAP also provides valuable internship experience. Along with classroom instruction, CAP offers on-site training at sponsoring dealerships under the direction of master technicians. Students rotate class time and internship until fulfilling the requirements of an Associate Degree in Automotive Service Technology (or similar).

In addition to familiarizing students with repair procedures for DaimlerChrysler products, CAP also acquaints them with dealership service operations.

THE ASSOCIATE DEGREE IN AUTOMOTIVE SERVICE TECHNOLOGY

DaimlerChrysler believes in the value of trained technicians. They have worked closely with colleges to design a relevant curriculum. Therefore, CAP students must complete all coursework to receive a degree.

EARN WHILE YOU LEARN

During the internship, students receive hourly wages and pay increases based on performance.

BONUS INCENTIVE FUND

Students are also eligible for the Bonus Incentive Fund. This bonus, paid by sponsoring dealers, compensates students based on the number of hours worked, according to the terms of their dealer/student agreement.

FLEXIBLE SPONSORSHIP AGREEMENT OPTIONS

You and your sponsor can choose from a number of agreement options. The CAP Agreement is a two-year plan. The CAP Contract is a four-year plan (two year internship and two year employment commitment.)

NATIONWIDE PARTICIPATION

CAP participation is open to any DaimlerChrysler dealer or qualifying student in the United States. Students can participate in several ways:

- Students living in or near a city with a CAP college can find a local sponsor and finish the program while living at home.
- If no CAP college is located nearby, you can attend school in another city, finding sponsorship there. Housing assistance is available through your chosen college.

LIMITED CLASS SIZE

Class size is limited to maintain a good instructor-to-student ratio. Quality candidates who apply early are chosen first.

Ferris State University
Placement Profile for 1999-2000
in the College of TECHNOLOGY

Curriculum	Total Grads No.	Total Response No.	Response Rate %	Cont. Ed. Only: Ferris Undgr.	Cont. Ed. Only: Ferris Gr.	Cont. Ed. Only: Other Undgr.	Cont. Ed. Only: Other Gr.	Cont. Ed. & Employed: Ferris Undgr.	Cont. Ed. & Employed: Ferris Gr.	Cont. Ed. & Employed: Other Undgr.	Cont. Ed. & Employed: Other Gr.	Employed Only	Seeking Emp.	Not Seeking Emp.	Total Employed No.	Total Employed %	Total Cont. Ed. No.	Total Cont. Ed. %	Employed in field No.	Employed in field %
Bachelor																				
Auto & Hvy. Equip. Mgt.	43	34	79.1%	0	0	0	0	0	0	1	1	32	0	0	34	*100.0%*	2	*5.9%*	33	*97.1%*
Comp. Netwks & Sys.	5	2	40.0%	0	0	0	0	0	0	0	0	1	1	0	1	*50.0%*	0	- - -	1	*100.0%*
Construction Mgt.	31	17	54.8%	2	0	0	0	0	0	0	0	14	1	0	14	*82.4%*	2	*11.8%*	14	*100.0%*
Elect/Electron.Eng.Tech.	16	7	43.8%	0	0	0	0	1	0	0	0	5	1	0	6	*85.7%*	1	*14.3%*	6	*100.0%*
Facilities Management	9	5	55.6%	0	0	0	0	0	0	0	0	5	0	0	5	*100.0%*	0	- - -	5	*100.0%*
Hvy.Equip.Serv.Eng.Tech.	9	9	100.0%	0	0	0	0	0	0	0	0	9	0	0	9	*100.0%*	0	- - -	9	*100.0%*
HVACR Eng.Tech.	32	27	84.4%	0	0	0	0	0	0	0	0	25	2	0	25	*92.6%*	0	- - -	24	*96.0%*
Manufacturing Eng.Tech.	22	18	81.8%	0	0	0	0	0	0	1	1	16	0	0	18	*100.0%*	2	*11.1%*	18	*100.0%*
Plastics Eng. Technology	49	37	75.5%	3	0	0	0	0	0	2	2	29	1	0	33	*89.2%*	7	*18.9%*	33	*100.0%*
Printing Management	16	14	87.5%	1	0	0	0	0	0	1	0	12	0	0	13	*92.9%*	2	*14.3%*	12	*92.3%*
Product Design Eng.Tech.	23	12	52.2%	0	0	0	0	0	0	0	0	12	0	0	12	*100.0%*	0	- - -	11	*91.7%*
Quality Engineering Tech.	3	1	33.3%	0	0	0	0	0	0	0	0	1	0	0	1	*100.0%*	0	- - -	1	*100.0%*
Surveying Engineering	20	12	60.0%	0	0	0	0	0	0	1	1	10	0	0	12	*100.0%*	2	*16.7%*	12	*100.0%*
Welding Eng.Tech.	28	22	78.6%	0	0	0	0	0	0	0	0	22	0	0	22	*100.0%*	0	- - -	22	*100.0%*
Associate																				
Architectural Tech.	13	8	61.5%	5	0	0	0	2	0	1	0	0	0	0	3	*37.5%*	8	*100.0%*	2	*66.7%*
Automotive Body	15	12	80.0%	7	0	0	0	2	0	0	0	3	0	0	5	*41.7%*	9	*75.0%*	5	*100.0%*
Automotive Machine Tech.	1	0	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	- - -	0	- - -	0	- - -
Automotive Serv.Tech.	49	39	79.6%	17	0	0	0	7	0	0	0	15	0	0	22	*56.4%*	24	*61.5%*	21	*95.5%*
Building Const.Tech.	30	27	90.0%	13	0	0	0	9	0	0	0	5	0	0	14	*51.9%*	22	*81.5%*	10	*71.4%*
Civil Engineering Tech.	3	2	66.7%	1	0	0	0	1	0	0	0	0	0	0	1	*50.0%*	2	*100.0%*	1	*100.0%*
Heavy Equipment Tech.	22	17	77.3%	9	0	0	0	3	0	0	0	5	0	0	8	*47.1%*	12	*70.6%*	8	*100.0%*
HVACR Technology	17	13	76.5%	9	0	0	0	2	0	0	0	2	0	0	4	*30.8%*	11	*84.6%*	3	*75.0%*
Industrial Elect. Tech.	18	17	94.4%	13	0	0	0	2	0	0	0	1	1	0	3	*17.6%*	15	*88.2%*	1	*33.3%*
Mfg Tooling Technology	15	14	93.3%	8	0	0	0	2	0	1	0	3	0	0	6	*42.9%*	11	*78.6%*	6	*100.0%*
Mechanical Eng. Tech.	13	11	84.6%	7	0	0	0	2	0	0	0	2	0	0	4	*36.4%*	9	*81.8%*	2	*50.0%*
Plastics Technology	47	45	95.7%	32	0	0	0	11	0	1	0	1	0	0	13	*28.9%*	44	*97.8%*	8	*61.5%*
Printing Technology	17	15	88.2%	10	0	0	0	2	0	0	0	3	0	0	5	*33.3%*	12	*80.0%*	4	*80.0%*
Rubber Technology	3	3	100.0%	2	0	0	0	1	0	0	0	0	0	0	1	*33.3%*	3	*100.0%*	0	- - -
Surveying Technology	4	3	75.0%	3	0	0	0	0	0	0	0	0	0	0	0	- - -	3	*100.0%*	0	- - -
Tech.Dftg.&Tool Design	16	13	81.3%	9	0	0	0	3	0	0	0	1	0	0	4	*30.8%*	12	*92.3%*	2	*50.0%*
Welding Technology	21	20	95.2%	16	0	1	0	3	0	0	0	0	0	0	3	*15.0%*	20	*100.0%*	1	*33.3%*
Totals:	610	476	78.0%	167	0	1	0	53	0	9	5	234	7	0	301	*63.2%*	235	*49.4%*	275	*91.4%*

Some respondents continuing their education did not indicate what type of program they were entering or the school they would be attending. It was assumed that the respondent would be entering the next highest academic degree (i.e. an associate's degree graduate would be entering a bachelor's degree program

Section 3

SUMMARY: EMPLOYER SURVEY OF GRADUATES

Conclusions:

Question 1

A5 Brakes Is the ASE service area that most frequently assigned to our grad 81%. This is relatively high tech area and probably indicates that most of our graduates start in this area. There is typically a lot of brake service and it represents a good starting point for the tech. The next greatest need is in area of A6 Electrical/Electronics Systems 75%. The A6 Electrical/Electronic Systems area represents the greatest need in the industry. It is fasted growing area and the most high tech. It also represents the newest technology in the industry that means that there are fewer highly trained technicians and requires the most updating. A4 Suspensions and Steering surveyed 63%. This area requires skill levels and service techniques that some technicians are not comfortable doing, therefore there is a great industry need in this area for competent technicians. Al Engine Repair and A7 Heating and Air Conditioning Service both surveyed at 44%. These highly specialized areas require limited service with highly trained and skilled techs already meeting the need so the turn over is less and the need is less. A2 Automatic Transmissions, A3 Manual Drive Train and Axles, both surveyed at 25% both these areas are similar to Al and A7 in that they have techs meeting the need and service required in these area is less. Ag Engine Performance and LI Advanced Engine Performance are very similar in technology and need. The industry has been relatively successful in recruiting and training highly qualified technicians to meet needs therefore the 38% and 19% respectively represents the industry need in this area. These percentages indicate that the

Automotive Technology Department at Ferris is right on track as far meeting the needs of the industry in the ASE certified training of its graduates. The philosophy of the Auto Dept. has been to provide the student with the best overall training in Auto Service to provide a "general practitioner" if you will.

Question 2

The ASE areas, which require the greatest understanding standing by our graduates, are A1 Engine Repair, and A5 Brakes. Followed by A4 Suspension and Steering, and A6 Electrical/Electronic. These four areas represent the volume of service work that most repair facilities experience. The remaining ASE areas represent less than 50% of the value place on them by the employers. The Automotive Service Technology program at Ferris State places major emphasis on all eight categories required by ASE to achieve Master Technician status. If is important to recognize that all eight areas and L I Advanced Engine Performance are recognized by the employers as necessary for the technician to be successful in the industry.

Question 3

ASE (Automotive Service Excellence) certification is voluntary. Michigan also is one of only two states that have mandatory state licensing of automotive technicians. Because state licensing test are more convenient to take and considerably less expensive most of the graduates opt for the state tests. The faculty in the department provides ASE review information to our student and encourage our students to take the ASE certifications tests because ASE is recognized in all 50 states and some foreign countries. The survey reveals that approximately 25 to 50% of our students are taking ASE tests and pursuing ASE certification. These numbers are encouraging because ASE certification is

more highly recognized and is required by some employers as a condition of employment. These numbers represent a significant increase form the last program review and will continue to rise.

Question 4

The graduates demonstrate the overall attitudes and abilities desirable by employers. Written communication skills, Cooperation with co-workers and supervisors and safe work practices rate among the highest. They also have developed a strong interest in developing technical skills. Their mechanical skills will improve as they gain hands on experience. The Automotive Service Technology program at Ferris State University is designed to provide technical skills before hands on skills. Overall, in this category our students appear to be prepared for work, possessing the employability necessary to succeed in the work place.

Question 5

The major areas of need for each of the eight ASE areas and L I are presented in question five for consideration. It is apparent that the department should continue with the same approach. Employers view the areas of importance to be the same as the Automotive Department and ASE.

Question 6

The overwhelming response was "yes" See the Comments.

Recommendations:

1. Keep doing what we are doing.
2. Further emphasize and encourage ASE certification.
3. Add the tools and equipment necessary to teach to ASE standards.
4. Continue to find employers that will hire our graduates.
5. Continue to enhance the employer Ferris relationships

Conclusion:

77 surveys were mailed to employers and 16 responded. This represents a 20.8% response rate. The Employers Survey of Graduates reveals that the needs of the employer and student are being met by the quality and content of instruction in the Automotive Service Department.

Ferris State University Automotive Service Technology Program
Employer Survey of Graduates

2002 Results

1. Which ASE/Michigan vehicle service areas is the employee regularly assigned? (Check all that apply):

47%	A1-	Engine Repair
20%	A2-	Automatic Transmissions/Transaxle
27%	A3-	Manual Drive Train and Axles
67%	A4-	Suspension and Steering
87%	A5-	Brakes
73%	A6-	Electrical/Electronic Systems
40%	A7-	Heating and Air Conditioning
33%	A8-	Engine Performance
20%	L1-	Automobile Advanced Engine Performance

Other (specify): *Employee should be certified in all eight areas.*
Vehicle Inspections

2. Which ASE/Michigan vehicle service areas does the employee need to understand to perform his/her duties? (Check all that apply):

87%	A1	60%	A6
47%	A2	40%	A7
47%	A3	33%	A8
73%	A4	20%	L1
80%	A5		Other

3. In which ASE/Michigan vehicle service areas is the employee certified? (Check all that apply)

33%	A1	33%	A6	
27%	A2	27%	A7	
27%	A3	33%	A8	
27%	A4		L1	
40%	A5		Other	*Employee is lacking certification in A5 (Scheer Motors)*
				Training Permits

4. Employee attitudes and abilities.
Please rate the following items that apply to your employee.
Circle your response based on the expectations of an entry-level technician.

Results					
Low				High	
1	2	3	4	5	
0%	6%	19%	38%	31%	Overall technical knowledge
0%	13%	25%	31%	38%	Mechanical skill level
0%	13%	25%	38%	31%	Task organizational practices
6%	0%	6%	31%	19%	Application of efficient work habits
0%	0%	6%	19%	19%	Ability to learn new procedures
0%	0%	25%	19%	13%	Cooperation and relationships with co-workers
0%	38%	50%	13%	25%	Cooperation and relationships with supervisors
0%	13%	50%	25%	31%	Leadership qualities
0%	13%	25%	31%	13%	Level of confidence to complete tasks
0%	6%	31%	13%	25%	Ability to diagnose vehicle problems
0%	0%	25%	25%	25%	Ability to accurately perform vehicle repairs
0%	6%	25%	25%	13%	Interest in developing technical knowledge
0%	6%	31%	13%	31%	Verbal communication skill level
0%	13%	13%	31%	38%	Written communication skill level
0%	6%	13%	38%	0%	Ability to interact with customers
0%	6%	13%	31%	50%	Exercises safe work practices
0%	6%	13%	38%	44%	Appearance and neatness

5. Specific employee skill levels.
   Please rate the following items that apply to your employee.
   Circle your response based on the expectations of an entry-level technician.

A1 – Engine Repair

Results Low 1	2	3	4	High 5	
81%	0%	0%	44%	25%	General engine diagnosis
75%	13%	0%	13%	31%	Removal and reinstallation (R&R)
44%	0%	6%	31%	0%	Engine block diagnosis
94%	0%	13%	19%	44%	Lubrication and cooling system diagnosis and repair

A2 – Automatic Transmissions and Transaxle

Results Low 1	2	3	4	High 5	
56%	0%	19%	19%	13%	General automatic transmission/transaxle diagnosis
56%	0%	6%	19%	25%	Automatic transmission/transaxle maintenance adjustments
56%	6%	6%	19%	19%	In-Vehicle automatic transmission/transaxle repair
56%	6%	19%	6%	13%	Off-Vehicle automatic transmission/transaxle repair

A3 – Manual Drive Train and Axles

Results Low 1	2	3	4	High 5	
44%	0%	13%	6%	19%	Clutch diagnosis and repair
44%	6%	0%	13%	19%	Manual transmission diagnosis and repair
44%	6%	0%	13%	19%	Manual transaxle diagnosis and repair
44%	0%	0%	13%	13%	Drive shaft and universal joint diagnosis and repair
44%	0%	0%	13%	13%	Half shaft and constant-velocity (CV) joint diagnosis and repair
44%	0%	6%	13%	13%	Rear axle diagnosis and repair
44%	0%	6%	13%	13%	Four-wheel/all-wheel drove component diagnosis and repair

A4 – Suspension and Steering

Results Low 1	2	3	4	High 5	
81%	0%	6%	44%	13%	Steering systems diagnosis and repair
81%	0%	6%	38%	19%	Suspension systems diagnosis and repair
56%	0%	0%	19%	19%	Wheel alignment diagnosis, adjustment, and repair
81%	0%	0%	19%	38%	Wheel/tire diagnosis and repair

A5 – Brakes

Results Low 1	2	3	4	High 5	
88%	0%	0%	38%	38%	Hydraulic system diagnosis and repair
100%	0%	0%	44%	38%	Drum brake diagnosis and repair
100%	0%	0%	44%	38%	Disc brake diagnosis and repair
81%	0%	6%	50%	6%	Power assist units diagnosis and repair
81%	0%	6%	31%	31%	Anti-lock brake system diagnosis and repair

A6 – Electrical/Electronic Systems

Results Low 1	2	3	4	High 5	
88%	0%	0%	19%	44%	General electrical system diagnosis
88%	0%	0%	13%	38%	Battery diagnosis and service
88%	0%	0%	13%	50%	Starting system diagnosis and repair
106%	0%	13%	13%	50%	Charging system diagnosis and repair
81%	0%	13%	19%	19%	Lighting system diagnosis and repair
88%	0%	0%	19%	44%	Wipers, horn, gauges, and warning devices diagnosis and repair
81%	0%	6%	19%	38%	Accessories diagnosis and repair

A7 – Heating and Air Conditioning

Results					
Low				High	
1	2	3	4	5	
50%	0%	0%	6%	19%	A/C system diagnosis and repair
50%	0%	0%	6%	25%	Refrigeration system component diagnosis and repair
50%	0%	0%	6%	25%	Heating and engine cooling systems diagnosis and repair
50%	0%	6%	6%	25%	Operating systems and related controls diagnosis and repair
44%	0%	0%	6%	19%	Refrigerant recovery, recycling, and handling

A8 – Engine Performance

Results					
Low				High	
1	2	3	4	5	
69%	0%	0%	25%	19%	General engine diagnosis
69%	0%	6%	13%	25%	Computerized engine controls diagnosis and repair
69%	0%	0%	19%	25%	Ignition system diagnosis and repair
63%	0%	0%	13%	25%	Fuel, air induction, and exhaust system diagnosis and repair
75%	0%	0%	25%	19%	Emission control systems diagnosis and repair

L1 – Automobile Advanced Engine Performance

Results					
Low				High	
1	2	3	4	5	
44%	0%	6%	0%	13%	General Powertrain diagnosis
44%	0%	6%	0%	13%	Computerized Powertrain controls diagnosis
44%	0%	0%	13%	6%	Ignition system diagnosis
44%	0%	0%	6%	13%	Fuel systems and air induction systems diagnosis
44%	0%	6%	6%	13%	Emissions control system diagnosis
44%	0%	6%	13%	6%	I/M (Inspection/Maintenance) failure diagnosis

Comments: _____

6. Based on your experience with this employee, would you consider hiring another graduate of the Ferris State University automotive service technology program?

   ___ Yes ___ No

   Comments:

Company That Responded:

- *Motor Quest of Jackson, MI*
- *Elhart Pontiac-GMC-Jeep*
- *Elhart Dodge*
- *Story Auto Group*
- *Daimler Chrysler*
- *Betten Chevy Olds Cadillac*

Responses:

This is our first "CAP" student we have hired. The only regret I have is that I didn't hire on a long time ago. Hats off to the instructor team at Ferris State University (Scheer Motors, Dave Petrie, Service Manager.)

We have great success with this program (Witt Buick.)
Employee is doing great, very knowledgeable, and wants to learn more (KM Northfield Dodge.)

It is not the University's fault that our 2 ASSET grads do not hustle; they are the two slowest working guys that we have ever had from ASSET (Krapohl Ford.)

Your students seem to have the most training compared to other students interviewed or hired from other technical programs. Other than a solid basic training in all areas and the proper attitude towards this career and work itself, what else could an employer ask for? (John O'Rourke, Classic Chevrolet)

One tech graduate, one tech will be graduating, and one tech enrolled next fall (Van Andel Flickema.)
At this point the program appears to do a good job, my experience with the student I have working has been great.

L1 Automobile Advanced Engine Performance

Do not expect L1 diagnosis capabilities for at least 5 or more years

Technology Program
Employer Survey of Graduates
Results Spring 2002

Questions 1: Which ASE/Michigan vehicle service areas is the employee regularly assigned?
(Check all that apply):

A1	7	44%
A2	4	25%
A3	4	25%
A4	10	63%
A5	13	81%
A6	12	75%
A7	7	44%
A8	6	38%
L1	3	19%

Question2:Which ASE/Michigan vehicle service areas does the employee need to understand to perform his/her duties? (Check all that apply):

A1	13	81%
A2	8	50%
A3	7	44%
A4	11	69%
A5	12	75%
A6	10	63%
A7	7	44%
A8	6	38%
L1	4	25%

Question 3:In which ASE/Michigan vehicle service areas is the employee certified? (Check all that apply)

A1	6	38%
A2	4	25%
A3	5	31%
A4	4	25%
A5	7	44%
A6	6	38%
A7	5	31%
A8	6	38%
L1	0	0%

Question 4:Employee attitudes and abilities.
Please rate the following items that apply to your employee.
Circle your response based on the expectations of an entry-level technician. Rating Scale Low(1) - High (5)

					Total Surveys	Return Percentage Out of 16						
0	2	5	4	5	16	100%	0%	6%	19%	38%	31%	31% Overall technical knowledge
0	1	4	6	5	16	100%	0%	13%	25%	31%	38%	25% Mechanical skill level
0	2	3	6	5	16	100%	0%	13%	25%	38%	31%	38% Task organizational practices
1	2	4	5	4	16	100%	6%	0%	6%	31%	19%	63% Application of efficient work habits
0	0	4	6	6	16	100%	0%	0%	6%	19%	19%	75% Ability to learn new procedures
0	0	1	5	10	16	100%	0%	0%	25%	19%	13%	19% Cooperation and relationships with co-workers
0	0	1	3	12	16	100%	0%	38%	50%	13%	25%	25% Cooperation and relationships with supervisors
0	6	4	3	3	16	100%	0%	13%	50%	25%	31%	13% Leadership qualities
0	2	8	2	4	16	100%	0%	13%	25%	31%	13%	38% Level of confidence to complete tasks
0	2	8	4	2	16	100%	0%	6%	31%	13%	25%	56% Ability to diagnose vehicle problems
0	1	4	5	6	16	100%	0%	0%	25%	25%	25%	44% Ability to accurately perform vehicle repairs
0	0	5	2	9	16	100%	0%	6%	25%	25%	13%	44% Interest in developing technical knowledge
0	1	4	4	7	16	100%	0%	6%	31%	13%	31%	44% Verbal communication skill level
0	1	4	4	7	16	100%	0%	13%	13%	31%	38%	50% Written communication skill level
0	2	5	2	7	16	100%	0%	6%	13%	38%	0%	44% Ability to interact with customers
0	1	2	5	8	16	100%	0%	6%	13%	31%	50%	100% Exercises safe work practices
0	1	2	6	7	16	100%	0%	6%	13%	38%	44%	100% Appearance and neatness

					Total Surveys	Return Percentage Out of 16					
Question A1: Engine Repair											
0	0	7	4	2	13	81%	0%	0%	44%	25%	13% General engine diagnosis
2	0	2	5	3	12	75%	13%	0%	13%	31%	19% Removal and reinstallation (R&R)
0	1	5	0	1	7	44%	0%	6%	31%	0%	6% Engine block diagnosis
0	2	3	7	3	15	94%	0%	13%	19%	44%	19% Lubrication and cooling system diagnosis and repair
Question A2: Automatic Transmissions and Transaxle											
0	3	3	2	1	9	56%	0%	19%	19%	13%	6% General automatic transmission/transaxle diagnosis
0	1	3	4	1	9	56%	0%	6%	19%	25%	6% Automatic transmission/transaxle maintenance adjustments
1	1	3	3	1	9	56%	6%	6%	19%	19%	6% In-Vehicle automatic transmission/transaxle repair
1	3	1	2	2	9	56%	6%	19%	6%	13%	13% Off-Vehicle automatic transmission/transaxle repair
Question A3: Manual Drive Tran and Axles											
0	2	1	3	1	7	44%	0%	13%	6%	19%	6% Clutch diagnosis and repair
1	0	2	3	1	7	44%	6%	0%	13%	19%	6% Manual transmission diagnosis and repair
1	0	2	3	1	7	44%	6%	0%	13%	19%	6% Manual transaxle diagnosis and repair
0	0	2	2	3	7	44%	0%	0%	13%	13%	19% Drive shaft and universal joint diagnosis and repair
0	0	2	2	3	7	44%	0%	0%	13%	13%	19% Half shaft and constant-velocity (CV) joint diagnosis and repair
0	1	2	2	2	7	44%	0%	6%	13%	13%	13% Rear axle diagnosis and repair
0	1	2	2	2	7	44%	0%	6%	13%	13%	13% Four-wheel/all-wheel drove component diagnosis and repair
Question A4: Suspension and Steering											
0	1	7	2	3	13	81%	0%	6%	44%	13%	19% Steering systems diagnosis and repair
0	1	6	3	3	13	81%	0%	6%	38%	19%	19% Suspension systems diagnosis and repair
0	0	3	3	3	9	56%	0%	0%	19%	19%	19% Wheel alignment diagnosis, adjustment, and repair
0	0	3	6	4	13	81%	0%	0%	19%	38%	25% Wheel/tire diagnosis and repair
Question A5: Brakes											
0	0	6	6	2	14	88%	0%	0%	38%	38%	13% Hydraulic system diagnosis and repair
0	0	7	6	3	16	100%	0%	0%	44%	38%	19% Drum brake diagnosis and repair

0	0	7	6	3	16	100%	0%	0%	44%	38%	19% Disc brake diagnosis and repair
0	1	8	1	3	13	81%	0%	6%	50%	6%	19% Power assist units diagnosis and repair
0	1	5	5	2	13	81%	0%	6%	31%	31%	13% Anti-lock brake system diagnosis and repair
Question A6: Electrical/Electronic Systems											
0	0	3	7	4	14	88%	0%	0%	19%	44%	25% General electrical system diagnosis
0	0	2	6	6	14	88%	0%	0%	13%	38%	38% Battery diagnosis and service
0	0	2	8	4	14	88%	0%	0%	13%	50%	25% Starting system diagnosis and repair
0	2	2	8	5	17	106%	0%	13%	13%	50%	31% Charging system diagnosis and repair
0	2	3	3	5	13	81%	0%	13%	19%	19%	31% Lighting system diagnosis and repair
0	0	3	7	4	14	88%	0%	0%	19%	44%	Wipers, horn, gauges, and warning devices diagnosis and repair 25%
0	1	3	6	3	13	81%	0%	6%	19%	38%	19% Accessories diagnosis and repair
Question A7: Heating and Air Conditioning											
0	0	1	3	4	8	50%	0%	0%	6%	19%	25% A/C system diagnosis and repair
0	0	1	4	3	8	50%	0%	0%	6%	25%	19% Refrigeration system component diagnosis and repair
0	0	1	4	3	8	50%	0%	0%	6%	25%	19% Heating and engine cooling systems diagnosis and repair
0	1	1	4	2	8	50%	0%	6%	6%	25%	13% Operating systems and related controls diagnosis and repair
0	0	1	3	3	7	44%	0%	0%	6%	19%	19% Refrigerant recovery, recycling, and handling
Question A8: Engine Performance											
0	0	4	3	4	11	69%	0%	0%	25%	19%	25% General engine diagnosis
0	1	2	4	4	11	69%	0%	6%	13%	25%	25% Computerized engine controls diagnosis and repair
0	0	3	4	4	11	69%	0%	0%	19%	25%	25% Ignition system diagnosis and repair
0	0	2	4	4	10	63%	0%	0%	13%	25%	25% Fuel, air induction, and exhaust system diagnosis and repair
0	0	4	3	5	12	75%	0%	0%	25%	19%	31% Emission control systems diagnosis and repair
Qustions L1: Automobile Advanced Engine Performance											
0	1	0	2	4	7	44%	0%	6%	0%	13%	25% General Powertrain diagnosis
0	1	0	2	4	7	44%	0%	6%	0%	13%	25% Computerized Powertrain controls diagnosis
0	0	2	1	4	7	44%	0%	0%	13%	6%	25% Ignition system diagnosis
0	0	1	2	4	7	44%	0%	0%	6%	13%	25% Fuel systems and air induction systems diagnosis
0	1	1	2	3	7	44%	0%	6%	6%	13%	19% Emissions control system diagnosis
0	1	2	1	3	7	44%	0%	6%	13%	6%	19% I/M (Inspection/Maintenance) failure diagnosis

Starting Hourly Salaries

	Starting	Ending	Time (Years)	Time (Months)	
	$11.00	$20.00	9.00		Gettel Auto Mall
	19.50	18.75	1.00		Ford Motor Company
	16.50	19.50	3.00		Dick Scott Motor Mall
	16.00	17.00		4.00	Jaguar of Troy
	9.50	9.50		3.00	Blume Farms Truck Shop
	17.75	23.20	5.00		Benchley Brothers
	5.25	18.00	8.00		Annie Rae Chevrolet
	15.00	16.75	3.00		Pres Kool Chevrolet
	9.00	12.00	7.00		Planet Powersports
	8.50	14.00	3.50		Valley Truck Parts
	13.00	17.85	3.00		Bud Kouts Chevy
Average	**$12.82**	**$16.96**	**4.72**	**3.50**	

Average Salary Increase Per Year

3 years	$ 3.20
3.5 years	$ 5.50
4.72 years	$ 4.14
5 years	$ 5.45
7 years	$ 3.00
8 years	$12.75
9 years	$ 9.00

Starting Salaries

	Starting	Ending	Time (Years)	
	$24,000.00	$32,000.00	2	City Mt. Pleasant
	$42,500.00	$54,000.00	2	Protech Automotive Services LLC
	$50,000.00	$52,000.00	2	General Motors
	$36,000.00	$38,000.00	2	GM Ponitac Truck Center
	$34,000.00	$44,000.00	1.5	Daimler Chrysler
	$60,000.00	$63,000.00	2	General Motors PowerTrain Bay City
	$27,040.00	$28,080.00	1	Bergmann Marine
	$40,000.00	$45,000.00	1.5	Bergstrom Automotive
	$51,840.00	$56,800.00	1.5	General Motors Cadiallac Plant
	$32,000.00	$35,000.00	2.5	Delphi
	$36,000.00	$38,500.00	2	Daimler Chrysler
	$20,000.00	$26,500.00	1	
	$50,000.00	$65,000.00	4	Bob Saks Dodge
	$42,000.00	$52,000.00	2.5	International Engine Division
	$31,000.00	$33,000.00	1	Parker Pontiac/Buick/GMC
	$42,000.00	$42,000.00	1	Toyota Motor Sales
	$29,994.00	$37,263.00	4	Petoskey Public Schools
	$30,000.00	$60,000.00	4	Autodie International
	$30,000.00	$80,000.00	7	Dykstras Auto Service
Average	**$ 37,282.84**	**$ 46,428.58**	**2.34**	

Average Salary Increase Per Year

Year	Increase
1	$3,180.00
1.5	$6,653.33
2	$4,833.33
2.5	$6,500.00
4	$17,423.00
7	$50,000.00

Average Salary Increase Per Month

Months	Increase
1	$ 265.00
1.5	$ 369.63
2	$ 201.39
2.5	$ 180.56
4	$ 362.98
7	$ 595.24

April 9, 2002

Dear Ferris State University Automotive Service Graduate Employer:

All programs at Ferris State University are reviewed every few years. Part of the review process includes Graduate Employer Survey.

The Ferris State University Automotive Service Technology program faculty endeavors to provide a high quality two-year automotive service degree. To be able to determine the effectiveness of our program and to meet present and future needs, we need your assistance and input. Please complete the enclosed survey and return it in the enclosed self-addressed stamped envelope.

Your time and effort is greatly appreciated and is important to this process. If you have any questions please call Greg Key, Department Chair, Automotive Department at (231) 591-5981.

Sincerely,

Greg Key
Automotive Service Technology

GK: km

Enclosure: Employer Survey of Graduates

Ferris State University Automotive Service Technology Program
Employer Survey of Graduates

Name of employer: _____

Name of employee: _____

Employee job title: _____

Date employee was hired (month/year): _____ 20____

1. Which ASE/Michigan vehicle service areas is the employee regularly assigned? (Check all that apply):

   - ☐ A1- Engine Repair
   - ☐ A2- Automatic Transmissions/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
   - ☐ L1- Automobile Advanced Engine Performance
   - ☐ Other (specify) _____

2. Which ASE/Michigan vehicle service areas does the employee need to understand to perform his/her duties? (Check all that apply):

☐ A1	☐ A6
☐ A2	☐ A7
☐ A3	☐ A8
☐ A4	☐ L1
☐ A5	☐ Other _____

3. In which ASE/Michigan vehicle service areas is the employee certified? (Check all that apply)

☐ A1	☐ A6
☐ A2	☐ A7
☐ A3	☐ A8
☐ A4	☐ L1
☐ A5	☐ Other _____

4. Employee attitudes and abilities.
Please rate the following items that apply to your employee.
Circle your response based on the expectations of an entry-level technician.

Low				High	
1	2	3	4	5	Overall technical knowledge
1	2	3	4	5	Mechanical skill level
1	2	3	4	5	Task organizational practices
1	2	3	4	5	Application of efficient work habits
1	2	3	4	5	Ability to learn new procedures
1	2	3	4	5	Cooperation and relationships with co-workers
1	2	3	4	5	Cooperation and relationships with supervisors
1	2	3	4	5	Leadership qualities
1	2	3	4	5	Level of confidence to complete tasks
1	2	3	4	5	Ability to diagnose vehicle problems
1	2	3	4	5	Ability to accurately perform vehicle repairs
1	2	3	4	5	Interest in developing technical knowledge
1	2	3	4	5	Verbal communication skill level
1	2	3	4	5	Written communication skill level
1	2	3	4	5	Ability to interact with customers
1	2	3	4	5	Exercises safe work practices
1	2	3	4	5	Appearance and neatness

Comments: _____

5. Specific employee skill levels.
Please rate the following items that apply to your employee.
Circle your response based on the expectations of an entry-level technician.

A1 – Engine Repair

Low				High	
1	2	3	4	5	General engine diagnosis
1	2	3	4	5	Removal and reinstallation (R&R)
1	2	3	4	5	Engine block diagnosis
1	2	3	4	5	Lubrication and cooling system diagnosis and repair

A2 – Automatic Transmissions and Transaxle

1	2	3	4	5	General automatic transmission/transaxle diagnosis
1	2	3	4	5	Automatic transmission/transaxle maintenance adjustments
1	2	3	4	5	In-Vehicle automatic transmission/transaxle repair
1	2	3	4	5	Off-Vehicle automatic transmission/transaxle repair

A3 – Manual Drive Train and Axles

1	2	3	4	5	Clutch diagnosis and repair
1	2	3	4	5	Manual transmission diagnosis and repair
1	2	3	4	5	Manual transaxle diagnosis and repair
1	2	3	4	5	Drive shaft and universal joint diagnosis and repair
1	2	3	4	5	Half shaft and constant-velocity (CV) joint diagnosis and repair
1	2	3	4	5	Rear axle diagnosis and repair
1	2	3	4	5	Four-wheel/all-wheel drove component diagnosis and repair

A4 – Suspension and Steering

1	2	3	4	5	Steering systems diagnosis and repair
1	2	3	4	5	Suspension systems diagnosis and repair
1	2	3	4	5	Wheel alignment diagnosis, adjustment, and repair
1	2	3	4	5	Wheel/tire diagnosis and repair

A5 – Brakes

1	2	3	4	5	Hydraulic system diagnosis and repair
1	2	3	4	5	Drum brake diagnosis and repair
1	2	3	4	5	Disc brake diagnosis and repair
1	2	3	4	5	Power assist units diagnosis and repair
1	2	3	4	5	Anti-lock brake system diagnosis and repair

A6 – Electrical/Electronic Systems

1	2	3	4	5	General electrical system diagnosis
1	2	3	4	5	Battery diagnosis and service
1	2	3	4	5	Starting system diagnosis and repair
1	2	3	4	5	Charging system diagnosis and repair
1	2	3	4	5	Lighting system diagnosis and repair
1	2	3	4	5	Wipers, horn, gauges, and warning devices diagnosis and repair
1	2	3	4	5	Accessories diagnosis and repair

A7 – Heating and Air Conditioning

1	2	3	4	5	A/C system diagnosis and repair
1	2	3	4	5	Refrigeration system component diagnosis and repair
1	2	3	4	5	Heating and engine cooling systems diagnosis and repair
1	2	3	4	5	Operating systems and related controls diagnosis and repair
1	2	3	4	5	Refrigerant recovery, recycling, and handling

A8 – Engine Performance

1	2	3	4	5	General engine diagnosis
1	2	3	4	5	Computerized engine controls diagnosis and repair
1	2	3	4	5	Ignition system diagnosis and repair
1	2	3	4	5	Fuel, air induction, and exhaust system diagnosis and repair
1	2	3	4	5	Emission control systems diagnosis and repair

L1 – Automobile Advanced Engine Performance

1	2	3	4	5	General Powertrain diagnosis
1	2	3	4	5	Computerized Powertrain controls diagnosis
1	2	3	4	5	Ignition system diagnosis
1	2	3	4	5	Fuel systems and air induction systems diagnosis
1	2	3	4	5	Emissions control system diagnosis
1	2	3	4	5	I/M (Inspection/Maintenance) failure diagnosis

Comments: _____

6. Based on your experience with this employee, would you consider hiring another graduate of the Ferris State University automotive service technology program?

___ Yes ___ No

Comments: _____

_____

_____

_____

_____

_____

SECTION 4

SUMMARY: STUDENT EVALUATION OF PROGRAM

Introduction:

The information in this section was gathered using the Student Perception of Occupational Education (PROE) survey.

The rating scale for responses is as follows:

1= Poor
2= Below Expectations
3= Acceptable
4= Good
5= Excellent
?= Don't Know

The number of responses and the percentage of total responses it represents are as follows:

Poor	=	178 responses or	3% of total
Below Expectations	=	350 responses or	7% of total
Acceptable	=	1117 responses or	21% of total
Good	=	2049 responses or	38% of total
Excellent	=	1376 responses or	26% of total
Don't Know	=	255 responses or	5% of total
Total Responses	=	5325	100%

Conclusions:

Based on the percentages listed above the students surveyed are very satisfied with almost all of the various aspects of the Automotive Service Program. The areas that showed the highest level of satisfaction were convenient location of courses, availability of course objectives, teaching methods meet needs, instructional equipment is current and in sufficient quantity, occupational instructors know the subject matter and provide information in interesting and understandable formats, and instructional facilities are safe, well maintained and functional.

The area that showed the highest level of dissatisfaction among students was in the financial area. The cost of things like tuition, books, supplies, etc. were thought to be unreasonable. This was followed by some dissatisfaction with related courses (English, Math, and Science) not being current and meaningful. The third area of some concern was in the Work Experience category; some students felt that the experience was not readily available at convenient locations, or readily available to day and evening students. The last area that showed a little dissatisfaction was in the area of Career Planning and Placement Services as well as Job Success information on former students.

With the increases in tuition and service fees and the attention they have received in the media it is really no surprise that cost issues lead the survey with the most dissatisfaction. Some of the job placement and career planning issues indicate that we don't advise all of our students on the services that our job placement office offers.

STUDENT EVALUATION OF PROGRAM
Survey Result 2002

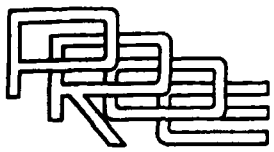
Number of Students Participating In Survey: 146

Student Perceptions of Occupational Education Programs PROE: Student Perceptions							
1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
1. Courses in your occupational program are:							
*Available and conveniently located.	0	5	21	88	58	0	
*Based on realistic prerequisites.	0	6	9	68	53	0	
*Available at moderate cost.	18	14	36	43	11	2	Cost Not Moderate
2. Written objectives for courses in you occupational program:							
*Are available to students.	0	2	19	80	41	3	
*Describe what you will learn in the course.	0	1	16	58	49	1	
*Are used by the instructor to keep you aware of your progress.	3	6	29	55	28	4	
3. Teaching methods, procedures, and course content:							
*Meet your occupational needs, interests, and objectives.	2	6	29	55	32	1	
*Provide supervised practice for developing job skills.	0	7	19	54	46	0	
4. Related courses (such as English, Math, and Science) are:							
*Pertinent to occupational instruction.	8	5	33	41	29	2	
*Current and meaningful to you.	16	21	44	33	12	2	
5. Work experience (or clinical experience) in your occupational program is:							
*Readily available at convenient locations.	11	12	36	27	38	3	
*Readily available to both day and evening students.	10	10	22	35	23	23	No Evening
*Coordinated with classroom instruction.	4	6	30	43	38	13	Do What's there
*Coordinated with employer supervision.	3	4	20	46	32	12	
6. Career planning information:							
*Meets your needs and interests.	3	8	22	45	29	20	Very Well Thought Out
*Helps you plan your program.	5	8	19	49	34	10	
*Helps you make career decisions and choices.	5	6	22	54	29	9	
*Helps you understand your rights and responsibilities as an employee.	4	3	30	50	26	11	No females in classes
*Helps you evaluate job opportunities in relation to salary, benefits, and conditions of employment.	3	11	37	45	16	9	
*Is provided by knowledgeable, interested staff.	3	12	29	47	20	9	
*Explains nontraditional occupational opportunities for both sexes.	8	6	28	40	24	13	
7. Job success information on former students in your occupational program:							
*Is provided to help you make career decisions.	2	14	27	51	16	12	Do this before you even get to school (ASSET stuents).
*Indicates how many job opportunities there are in your occupation.	2	10	33	50	13	11	
*Identifies where these job opportunities are located.	1	18	32	43	16	9	
*Tells about job advancement opportunities.	1	15	33	46	14	9	
8. Placement services are available to:							
*Help you find employment opportunities.	4	14	24	47	22	10	
*Prepare you to apply for a job.	7	8	34	45	18	8	

9. Occupational instructors:							
*Know the subject matter and occupational requirements.	3	9	20	49	29	9	
*Are available to provide help when you need it.	0	4	21	43	54	2	
*Provide instruction so it is interesting and understandable.	0	6	21	46	47	2	
10. Instructional support services (such as tutoring, lab assistance) are:							
*Available to meet your needs and interests.	0	6	25	44	37	7	
*Provided by knowledgeable, interested staff.	2	10	25	32	30	17	
11. Instructional lecture and laboratory facilities:							
*Provide adequate lighting, ventilation, heating, power, and other utilities.	2	4	23	41	33	1	
*Include enough workstations for the number of students enrolled.	3	5	31	47	39	1	
*Are safe, functional, and well maintained.	2	6	15	48	55	0	
*Are available on an equal basis for all students.	1	4	21	45	50	3	
12. Instructional equipment is:							
*Current and representative of industry.	0	5	31	38	47	0	Need more equipment
*In sufficient quantity to avoid long delays in use.	2	6	33	50	29	0	
*Safe and in good condition.	1	7	20	76	35	1	
13. Instructional materials (e.g., textbooks, reference books, supplies) are:							
*Available and conveniently located for use as needed.	1	3	26	45	43	0	
*Current and meaningful to the subject.	1	8	15	49	32	1	
*Not biased toward "traditional" sex roles.	4	9	35	30	31	4	No Female Instructors
*Available at reasonable cost.	33	20	22	28	18	1	Buying tolls isn't cheap No college book is available at a good price!

RECOMMENDATIONS:

- Service floor needs more lights, especially droplights.
- Local businesses need to be more involved with students in the automotive programs.
- Program should offer more performance oriented classes and laboratories.
- The program needs to invest in more car batteries.
- Instructional equipment needs to be updated, currently behind industry.
- Work experience needs to be readily available at convenient locations, a large amount of the student felt they were forced to work at specific locations.
- Need to implement more computer based training (COTs), not enough currently.
- Need more computers with CBT software.



College _____

Title of Your Program _____

STUDENT PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

Check statement that best describes your objective for attending the college:

- Prepare to get a job ..... ____
- Improve job skills for present occupation ..... ____
- Prepare for transfer to another college ..... ____
- Personal interest ..... ____
- Other (Describe) ..... ____

_____

INSTRUCTIONS: Rate each item using the following guide:
EXCELLENT means nearly ideal, top 5 to 10%
GOOD is a strong rating, top one-third
ACCEPTABLE is average, the middle-third
BELOW EXPECTATIONS is only fair, bottom one-third
POOR is seriously inadequate, bottom 5 to 10%

A Comment column has been provided if you wish to explain your rating

		Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS
Please rate each item below:									
1. Courses in your occupational program are:									
•Available and conveniently located.	1								
•Based on realistic prerequisites.	2								
•Available at moderate cost.	3								
. Written objectives for courses in your occupational program:									
•Are available to students.	4								
•Describe what you will learn in the course.	5								
•Are used by the instructor to keep you aware of your progress.	6								
3. Teaching methods, procedures and course content:									
•Meet your occupational needs, interests and objectives.	7								
•Provide supervised practice for developing job skills.	8								
4. Related courses (such as English, Mathematics, Science) are:									
•Pertinent to occupational instruction.	9								
•Current and meaningful to you.	10								
5. Work experience (or clinical experience) in your occupational program is:									
•Readily available at convenient locations.	11								
•Readily available to both day and evening students.	12								
•Coordinated with classroom instruction.	13								
•Coordinated with employer supervision.	14								
. Career planning information:									
•Meets your needs and interests.	15								
•Helps you plan your program.	16								
•Helps you make career decisions and choices.	17								

over, please

PROE

STUDENT PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

		Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS
6. Career planning information (Continued):									
• Helps you understand your rights and responsibilities as an employee.	18								
• Helps you evaluate job opportunities in relation to salary, benefits and conditions of employment.	19								
• Is provided by knowledgeable, interested staff.	20								
• Explains nontraditional occupational opportunities for both sexes.	21								
7. Job success information on former students in your occupational program:									
• Is provided to help you make career decisions.	22								
• Indicates how many job opportunities there are in your occupation.	23								
• Identifies where these job opportunities are located.	24								
• Tells about job advancement opportunities.	25								
8. Placement services are available to:									
• Help you find employment opportunities.	26								
• Prepare you to apply for a job.	27								
9. Occupational instructors:									
• Know the subject matter and occupational requirements.	28								
• Are available to provide help when you need it.	29								
• Provide instruction so it is interesting and understandable.	30								
10. Instructional support services (such as tutoring, lab assistance) are:									
• Available to meet your needs and interests.	31								
• Provided by knowledgeable, interested staff.	32								
11. Instructional lecture and laboratory facilities:									
• Provide adequate lighting, ventilation, heating, power, and other utilities.	33								
• Include enough work stations for the number of students enrolled.	34								
• Are safe, functional, and well maintained.	35								
• Are available on an equal basis for all students.	36								
12. Instructional equipment is:									
• Current and representative of industry.	37								
• In sufficient quantity to avoid long delays in use.	38								
• Safe and in good condition.	39								
13. Instructional materials (e.g., textbooks, reference books, supplies) are:									
• Available and conveniently located for use as needed.	40								
• Current and meaningful to the subject.	41								
• Not biased toward "traditional" sex roles.	42								
• Available at reasonable cost.	43								

SECTION 5

SUMMARY: FACULTY EVALUATION OF PROGRAM

The one thing that seems to be consistent in both the numeric and narrative statements by the faculty is the need for relevant funding for both the operating budget and equipment money's. As can be seen by the S&E Budget Summary the three programs in the automotive department spend their entire S&E money on internship travel, copies for classes, and telephone expenses. With the total cost of these few items. totally over $49,000 this leaves about $300 of flexibility in my budget for the whole year. That is less than $100 of expendable income per program. With inflation being at 2.8 to 3 percent over the last couple of years and with zero increases to my base budget it is just a matter of time before my programs and other programs run in the red. With the increase from 129 students in 1996 to 195 students last year and projected to 230 this year we have increased 100 students. That is over double the enrollment to the automotive service group. 7 out of the 12 departments only have from 105-125 students in them. This has put a financial strain on the automotive service budget because of the large number of student's increases (doubled) the number of internship visits, copies, phone, etc. As can be seen by the faculty comments for professional development and technical training courses they would like to attend I am not able to financially afford them the opportunities. With the projected enrollment increases in the automotive service program over the next couple of years because of the attracting factor the new Automotive Engineering Technology program our budget will be further in the red. The enrollment increase can be seen on the QUOTTEC screen for Fall 2002 of 118 applications for 80 seats. We have already screened this list by sending them letters so they could respond if

they plan on attending this fall. We have been removing them from the list if they do not plan on attending. However, responses have been low so it is difficult to tell how many will attend. However, all indications are increased enrollment from last year.

FACULTY EVALUATION OF PROGRAM
Survey Results 2002

Number of Administrators and Faculty Participating In Survey: 10

Faculty Perceptions of Occupational Education Programs PROE: Faculty Perception							
1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
Goals and Objectives							
1. Participation in Development of College Occupational Education Program Plan		1	1	4	3		
2. Program Goals			1	1	7		
3. Course Objectives			1	2	6		
4. Competency Based Performance Objectives				4	5		
5. Use of Competency Based Performance Objectives				5	4		
6. Use of Information on Labor Market Needs				2	7		
7. Use of Information on Job Performance Requirements				4	5		
8. Use of Profession/Industry Standards				1	8		
9. Use of Student Follow-Up Information		1	1	2	5		
Processes							
10. Adaptation of Instruction			1	2	6		
11. Relevance of Supportive Courses	1	2		6			
12. Coordination with Other Community Agencies and Educational Programs			2	3	4		
13. Provision for Work Experience, Cooperative Education or Clinical Experience	1		1	3	4		
14. Program Availability and Accessibility				3	6		Need more advertising
15. Provision for the Disadvantaged			3	4		2	
16. Provision for the Handicapped		1	4	2		2	
17. Efforts to Achieve Sex Equity			1	4	3	1	Very few women in field
18. Provision for Program Advisement					9		
19. Provision for Career Planning and Guidance				2	7		
20. Adequacy of Career Planning and Guidance				3	6		
21. Provision for Employability Information					9		
22. Placement Effectiveness for Students in this Program			1		8		
23. Student Follow-up System		1	1	6	1		No consistency in follow-up
24. Promotion of this Occupational Program		1	1	4	3		
Resources							
25. Provision for Leadership and Coordination			2	4	3		
26. Qualifications of Administrators and/or Supervisors		1	1	3	4		
27. Instructional Staffing		1	2	3	3		
28. Qualifications of Instructional Staff				1	8		
29. Professional Development Opportunities		1	1	3	4		
30. Use of Instructional Support Staff		1		5	2	1	
31. Use of Clerical Support Staff				4	5		
32. Adequacy and Availability of Instructional Equipment	1		2	3	3		Need many new tools
33. Maintenance and Safety of Instructional Equipment				2	7		
34. Adequacy of Instructional Facilities			1	7	2		
35. Scheduling of Instructional Facilities			1	4	4		Lab Schedules Need Improved
36. Adequacy and Availability of Materials and Supplies				4	5		
37. Adequacy and Availability of Learning Resources				4	4	1	
38. Use of Advisory Committees			1		8		
39. Provisions in Current Operating Budget	2	2	3	2			Need recruiting funds
40. Provisions in Capital Outlay Budget for Equipment	2	1	4	2			

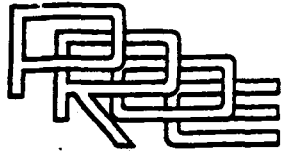
RECOMMENDATIONS:

CHIEF OCCUPATIONAL EDUCATION STRENGTH OF YOUR PROGRAM

- Excellent faculty and staff, provide current technology to our students.
- Course outlines, syllabi, and course objectives are clearly defined for each class.
- The instructors have a lot of knowledge and the courses taught require special skills.
- The high performance programs spark high interest from students and should be utilized to broaden their education in the Automotive Field.
- Technical diversity of the faculty
- The support received from corporate sponsors
- The program options offered to our students.
- Industrial support
- Courses are becoming more competencies based.

WHAT ARE THE MAJOR NEEDS FOR IMPOVEMENT IN YOUR PROGRAM

- Additional funding for equipment and supplies
- New building
- Money is not always there to keep the program up-to-date as needed.
- We need more equipment and advertising of our programs.
- We need more access to training in our subject matter.
- More participation by faculty in the budget planning process
- Recruiting, faculty needs to take a more proactive approach to getting students.
- A more hands on approach by our department curriculum committee.
- University needs to prioritize instruction as #1
- Better equipment lab facilities
- Need exhaust ventilation equipment for multipurpose labs in both "Brakes" lab and new lab in the "Body Shop".
- We need someone the maintain school vehicles.
- It is not uncommon for faculty member to spend 2 to 3 hours a week getting lab vehicles prepared for class. From having to clean snow off vehicles, jump starting due to dead batteries and fueling the vehicles is very time consuming. The faculty member in preparation for class could use this time.



COLLEGE_____

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

INSTRUCTIONS TO RESPONDENTS

On the following pages you are asked to give your perceptions of your occupational program (such as registered nursing, automotive technology, secretarial science). The items you are asked to rate are grouped into the major components of the Program Review in Occupational Education (PROE) system, namely:

- Goals and Objectives
- Processes
- Resources

Rate each item by checking your best judgment on a five point scale ranging from poor to excellent. Only check one answer per item. A "Don't Know" column has been provided in the event you really don't have sufficient information to rate an item. Space has been provided for you to note comments that may help to clarify your ratings or to indicate modifications of a standard to make it more relevant for your program.

Criteria for excellent and poor ratings are provided for each item. *Excellent* represents a nearly ideal or exemplary situation; *poor,* one of serious inadequacy. As a guide, ratings may be made with the following in mind:

EXCELLENT means ideal, top 5 to 10%
GOOD is a strong rating, top 1/3rd
ACCEPTABLE is average, the middle 1/3rd
BELOW EXPECTATIONS is only fair, bottom 1/3rd
POOR is seriously inadequate, bottom 5 to 10%

This form may be completed as a *consensus* evaluation by the principal persons involved with a specific occupational program. Examples of such persons would be instructors, department or division chairpersons, program coordinators, and administrators such as occupational dean. If preferred, respondents may complete individual forms.

To help with tabulation of responses, please provide the information requested below before completing your rating.

PROGRAM TITLE_____ USOE CODE #__ __.__ __ __ __ __ __ __

PERSONS PARTICIPATING IN CONSENSUS EVALUATION OR INDIVIDUAL COMPLETING THIS FORM:

Name_____ Title _____

_____ _____

_____ _____

_____ _____

_____ _____

Thanks for your cooperation!

PROE

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

		Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS
GOALS AND OBJECTIVES									
1. Participation in Development of College Occupational Education Program Plan *Excellent*—Administrators and/or other supervisory personnel involved in developing and revising the college plan for this occupational program seek and respond to faculty, student and community input. *Poor*—Development of the plan for this program is basically the work of one or two persons in the college.	1								
2. Program Goals *Excellent*—Written goals for this program state realistic outcomes (such as planned enrollments, completions, placements) and are used as one measure of program effectiveness. *Poor*—No written goals exist for this program.	2								
3. Course Objectives *Excellent*—Written measurable objectives have been developed for all occupational courses in this program and are used to plan and organize instruction. *Poor*—No written objectives have been developed for courses in this program.	3								
4. Competency Based Performance Objectives *Excellent*—Competency based performance objectives are on file in writing, consistent with employment standards, and tell students what to expect and help faculty pace instruction. *Poor*—Competency based performance objectives have not been developed for courses in this program.	4								
5. Use of Competency Based Performance Objectives *Excellent*—Competency based performance objectives are distributed to students and used to assess student progress. *Poor*—Competency based performance objectives are not used with students for progress evaluation nor are students aware that they exist.	5								
6. Use of Information on Labor Market Needs *Excellent*—Current data on labor market needs and emerging trends in job openings are systematically used in developing and evaluating this program. *Poor*—Labor market data is not used in planning or evaluation.	6								
7. Use of Information on Job Performance Requirements *Excellent*—Current data on job performance requirements and trends are systematically used in developing and evaluating this program and content of its courses. *Poor*—Job performance requirements information has not been collected for use in planning and evaluating.	7								

PROE

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

Keypunch Instructions	Poor	Below Expectations	Acceptable	Good	Excellent	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)
	1	2	3	4	5		

GOALS AND OBJECTIVES (Continued)

8. Use of Profession/Industry Standards — 8

Excellent—Profession/industry standards (such as licensing, certification, accreditation) are consistently used in planning and evaluating this program and content of its courses.
Poor—Little or no recognition is given to specific profession/industry standards in planning and evaluating this program.

9. Use of Student Follow-Up Information — 9

Excellent—Current follow-up data on completers and leavers (students with marketable skills) are consistently and systematically used in evaluating this program.
Poor—Student follow-up information has not been collected for use in evaluating this program.

PROCESSES

10. Adaptation of Instruction — 10

Excellent—Instruction in all courses required for this program recognizes and responds to individual student interests, learning styles, skills, and abilities through a variety of instructional methods (such as small group or individualized instruction, laboratory or "hands on" experiences, open entry/open exit, credit by examination).
Poor—Instructional approaches in this program do not consider individual student differences.

11. Relevance of Supportive Courses — 11

Excellent—Applicable supportive courses (such as anatomy and physiology, technical communications, technical mathematics) are closely coordinated with this program and are kept relevant to program goals and current to the needs of students.
Poor—Supportive course content reflects no planned approach to meeting needs of students in this program.

12. Coordination with Other Community Agencies and Educational Programs. — 12

Excellent—Effective liaison is maintained with other programs and educational agencies and institutions (such as high schools, other community colleges, four year colleges, area vocational schools, proprietary schools, CETA) to assure a coordinated approach and to avoid duplication in meeting occupational needs of the area or community.
Poor—College activities reflect a disinterest in coordination with other programs and agencies having impact on this program.

13. Provision for Work Experience, Cooperative Education or Clinical Experience. — 13

Excellent—Ample opportunities are provided for related work experience, cooperative education, or clinical experience for students in this program. Student participation is well coordinated with classroom instruction and employer supervision.
Poor—Few opportunities are provided in this program for related work experience, cooperative education, or clinical experience where such participation is feasible.

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

		Keypunch Instructions	Poor	Below Expectations	Acceptable	Good	Excellent	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)
			1	2	3	4	5		
PROCESSES (Continued)									
14. Program Availability and Accessibility *Excellent*—Students and potential students desiring enrollment in this program are identified through recruitment activities, treated equally in enrollment selection, and not discouraged by unrealistic prerequisites. The program is readily available and accessible at convenient times and locations. *Poor*—This program is not available or accessible to most students seeking enrollment. Discriminatory selection procedures are practiced.	14								
15. Provision for the Disadvantaged *Excellent*—Support services are provided for disadvantaged (such as socioeconomic, cultural, linguistic, academic) students enrolled in this program. Services are coordinated with occupational instruction and results are assessed continuously. *Poor*—No support services are provided for disadvantaged students enrolled in this program.	15								
16. Provision for the Handicapped. *Excellent*—Support services are provided for handicapped (physical, mental, emotional, and other health impairing handicaps) students enrolled in this program. Facilities and equipment adaptations are made as needed. Services and facilities modifications are coordinated with occupational instruction and results are assessed continuously. *Poor*—No support services or facilities and equipment modifications are available for handicapped students enrolled in this program.	16								
17. Efforts to Achieve Sex Equity *Excellent*—Emphasis is given to eliminating sex bias and sex stereotyping in this program: staffing, student recruitment, program advisement, and career counseling; access to and acceptance in programs; selection of curricular materials; instruction; job development and placement. *Poor*—Almost no attention is directed toward achieving sex equity in this program.	17								
18. Provision for Program Advisement *Excellent*—Instructors or other qualified personnel advise students (day, evening, weekend) on program and course selection. Registration procedures facilitate course selection and sequencing. *Poor*—Instructors make no provision for advising students on course and program selection.	18								
19. Provision for Career Planning and Guidance *Excellent*—Day, evening, and weekend students in this program have ready access to career planning and guidance services. *Poor*—Little or no provision is made for career planning and guidance services for students enrolled in this program.	19								

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

		Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)
PROCESSES (Continued)									
20. Adequacy of Career Planning and Guidance *Excellent*—Instructors or other qualified personnel providing career planning and guidance services have current and relevant occupational knowledge and use a variety of resources (such as printed materials, audiovisuals, job observation) to meet individual student career objectives. *Poor*—Career planning and guidance services are ineffective and staffed with personnel who have little occupational knowledge.	20								
21. Provision for Employability Information. *Excellent*—This program includes information which is valuable to students as employees (on such topics as employment opportunities and future potential, starting salary, benefits, responsibilities and rights). *Poor*—Almost no emphasis is placed on providing information important to students as employees.	21								
22. Placement Effectiveness for Students in this Program *Excellent*—The college has an effectively functioning system for locating jobs and coordinating placement for students in this program. *Poor*—The college has no system or an ineffective system for locating jobs and coordinating placement for occupational students enrolled in this program.	22								
23. Student Follow-up System *Excellent*—Success and failure of program leavers and completers are assessed through periodic follow-up studies. Information learned is made available to instructors, students, advisory committee members and others concerned (such as counselors) and is used to modify this program. *Poor*—No effort is made to follow up former students of this program.	23								
24. Promotion of this Occupational Program *Excellent*—An active and organized effort is made to inform the public and its representatives (such as news media, legislators, board, business community) of the importance of providing effective and comprehensive occupational education and specific training for this occupation to gain community support. *Poor*—There is no organized public information effort for this program.	24								
RESOURCES									
25. Provision for Leadership and Coordination *Excellent*—Responsibility, authority, and accountability for this program are clearly identified and assigned. Administrative effectiveness is achieved in planning, managing, and evaluating this program. *Poor*—There are no clearly defined lines of responsibility, authority, and accountability for this program.	25								

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

		Keypunch Instructions	Poor	Below Expectations	Acceptable	Good	Excellent	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)
			1	2	3	4	5		
RESOURCES (Continued)									
26. Qualifications of Administrators and/or Supervisors *Excellent*—All persons responsible for directing and coordinating this program demonstrate a high level of administrative ability. They are knowledgeable in and committed to occupational education. *Poor*—Persons responsible for directing and coordinating this program have little administrative training, education, and experience.	26								
27. Instructional Staffing *Excellent*—Instructional staffing for this program is sufficient to permit optimum program effectiveness (such as through enabling instructors to meet individual student needs, providing liaison with advisory committees, and assisting with placement and follow-up activities). *Poor*—Staffing is inadequate to meet the needs of this program effectively.	27								
28. Qualifications of Instructional Staff *Excellent*—Instructors in this program have two or more years in relevant employment experience, have kept current in their field, and have developed and maintained a high level of teaching competence. *Poor*—Few instructors in this program have relevant employment experience or current competence in their field.	28								
29. Professional Development Opportunities *Excellent*—The college encourages and supports the continuing professional development of faculty through such opportunities as conference attendance, curriculum development, work experience. *Poor*—The college does not encourage or support professional development of faculty.	29								
30. Use of Instructional Support Staff *Excellent*—Paraprofessionals (such as aides, laboratory assistants) are used when appropriate to provide classroom help to students and to ensure maximum effectiveness of instructors in the program. *Poor*—Little use is made of instructional support staff in this program.	30								
31. Use of Clerical Support Staff *Excellent*—Office and clerical assistance is available to instructors in this program and used to ensure maximum effectiveness of instructors. *Poor*—Little or no office and clerical assistance is available to instructors; ineffective use is made of clerical support staff.	31								
32. Adequacy and Availability of Instructional Equipment. *Excellent*—Equipment used on or off campus for this program is current, representative of that used on jobs for which students are being trained, and in sufficient supply to meet the needs of students. *Poor*—Equipment for this program is outmoded and in insufficient quantity to support quality instruction.	32								

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS (Please note explanatory remarks or needs for improvement)

RESOURCES (Continued)

33. Maintenance and Safety of Instructional Equipment — 33

Excellent—Equipment used for this program is operational, safe, and well maintained.
Poor—Equipment used for this program is often not operable and is unsafe.

34. Adequacy of Instructional Facilities — 34

Excellent—Instructional facilities (excluding equipment) meet the program objectives and student needs, are functional and provide maximum flexibility and safe working conditions.
Poor—Facilities for this program generally are restrictive, disfunctional, or overcrowded.

35. Scheduling of Instructional Facilities — 35

Excellent—Scheduling of facilities and equipment for this program is planned to maximize use and be consistent with quality instruction.
Poor—Facilities and equipment for this program are significantly under- or over-scheduled.

36. Adequacy and Availability of Instructional Materials and Supplies — 36

Excellent—Instructional materials and supplies are readily available and in sufficient quantity to support quality instruction.
Poor—Materials and supplies in this program are limited in amount, generally outdated, and lack relevance to program and student needs.

37. Adequacy and Availability of Learning Resources — 37

Excellent—Learning resources for this program are available and accessible to students, current and relevant to the occupation, and selected to avoid sex bias and stereotyping.
Poor—Learning resources for this program are outdated, limited in quantity, and lack relevance to the occupation.

38. Use of Advisory Committees — 38

Excellent—The advisory committee for this program is active and representative of the occupation.
Poor—The advisory committee for this program is not representative of the occupation and rarely meets.

39. Provisions in Current Operating Budget — 39

Excellent—Adequate funds are allocated in the college operating budget to support achievement of approved program objectives. Allocations are planned to consider instructor budget input.
Poor—Funds provided are seriously inadequate in relation to approved objectives for this program.

40. Provisions in Capital Outlay Budget for Equipment — 40

Excellent—Funds are allocated in a planned effort to provide for needed new equipment and for equipment replacement and repair, consistent with the objectives for this program and based on instructor input.
Poor—Equipment needs in this program are almost totally unmet in the capital outlay budget.

FACULTY PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

Please answer the following: (Use back of page and extra sheets if necessary).

1. What are the chief occupational education strengths of your program?

2. What are the major needs for improvement in your program and what action is required to achieve these improvements?

PLEASE IDENTIFY THE POSITION OF THE PERSON COMPLETING THIS FORM AND THE OCCUPATIONAL PROGRAM (such as registered nursing, data processing).

Check One:

Division/Department Chair _____
Faculty _____
Counselor _____
Other, please specify: _____ _____

Program:

_____

SECTION 6

SUMMARY: ADVISORY COMMITTEE PERCEPTIONS OF PROGRAM

Advisory Committee Evaluation of the Program
Summary & Conclusion

Eight members of the advisory committee responded to the survey. The survey questions were rated on a scale of 1-5, 1 being poor and 5 being excellent.

Instructional program content and quality are:

- Based on performance objective's that represents job skills and knowledge required for successful entry-level employment.
- Designed to provide students with practical job application experience.
- Responsive to upgrading and retaining needs of employment person.
- Periodically reviewed and revised to keep current with charging job practice and technology.

Summary 1

The advisory committee members rated all areas in 4 or 5 category. The advisory committee is of the opinion that our program is meeting the needs of these areas. Two members feel that the program could be more responsive to upgrading faculty needs. The program should develop ways to encourage faculty to attend updating.

Summary 2

Instructional Equipment

The advisory committee is please with the instructional equipment. We do need to acquire a few new specialties items. A dynamic time balancer and an on car brake lathe, and the new sun scope.

Summary 3

Instructional Facilities

All areas of the facilities received high marks. The Daimler Chrysler College Automotive Program (CAP) needs a dedicated educational area.

Summary 4

Placement

The placement of Ferris Automotive students is and always has been near 100%. The advisory committee is pleased with all activities of placement in the Automotive Department.

Summary 5

Follow up studies on program completers and Leavers

Our students are well prepared with entry-level skills, the data collected from former students related to job success are good.

Recommendations

1. Keep doing what we are doing.
2. Add necessary equipment.
3. Build the program by adding graduated and enhancing curriculum.

Conclusion

Members of the advisory committee that were survey had very positive results.

ADVISORY COMMITTEE EVALUATION OF PROGRAM
Survey Results 2002

Number of Committee Members Participating In Survey: 8

PROE: Advisory Committee							
1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
1. Instructional program content and quality are:							
*Based on performance objectives that represent job skills and knowledge required for successful entry-level employment.	0	0	0	1	7	0	
*Designed to provide students with practical job application experience.	0	0	0	0	8	0	
*Responsive to upgrading and retaining needs of employed persons.	0	0	0	2	6	0	
*Periodically reviewed and revised to keep current with changing job practices and technology.	0	0	0	1	7	0	
2. Instructional equipment is:							
*Well maintained.	0	0	0	0	7	1	
*Current and representative of that used on the job.	0	0	0	0	7	1	
3. Instructional facilities:							
*Provide adequate lighting, ventilation, heating, power, and other utilities.	0	0	0	1	6	0	
*Allocate sufficient space to support quality instruction.	0	0	0	1	7	0	
*Meet essential health and safety standards.	0	0	0	0	6	2	
4. Placement:							
*Services are available to students completing the program.	0	0	0	0	8	0	
*Job opportunities exist for students completing the program or leaving with marketable skills.	0	0	0	0	8	0	
5. Follow-up studies on program completers and leavers (students with marketable skills):							
*Demonstrate that students are prepared for entry-level employment.	0	0	0	1	7	0	
*Collect information on job success and failure of former students.	0	0	0	1	5	2	
*Provide information used to review and, where warranted, revise the program.	0	0	0	0	5	2	

RECOMMENDATIONS:

1. **What are the major strengths of the college's occupational program in your field(s)?**

   - Manufacture specific for my dealership needs
   - Faculty involvement with the students and industry to obtain current technology and equipment to keep the program at the for front of knowledge.
   - Positive student attitude, also when asked students they state they have proper and sufficient hands on and classroom training.
   - Conducts real world examples of problem the technician will face in the field using the same tools and equipment that dealers use.
   - On the job experience and brand specific auto training.

2. **What are the major needs for improvement in the college's occupational program in your field(s)?**

   - More test vehicles and assemblies
   - Donations from the manufacturer's and industry to get a more diverse base of product to train with.
   - More candidates meeting with high school guidance counselors regarding how positive and fulfilling it can be. Ability to make more people aware of the program.
   - More training books, cars, motors, ect...
   - Maintaining a supply of current level vehicles in a good working condition.
   - Having a sufficient supply of components for the students to work on.
   - Change the co-op times so the students are not working the winter sessions. Dealers are much slower in the winter and it is harder for the students to learn during that time.

3. **Do you have additional comments or suggestions for the program or for utilization of the advisory committee? If so, please state briefly.**

   - Pete Alley does a <u>great</u> job! He is a big asset to Ferris State University and the CAP program.
   - I would like to see the AYES program be connected with the CAP program and have the students meet and discuss the programs. Communicate, Communicate, Communicate.
   - These students have chosen this program for its specific technical content. I believe more computer classes or automotive classes should replace cultural enrichment and social awareness.

Advisory Committee Meetings 2001-2002

Program	Date
Automotive Body Advisors: Jim Bigelow and Gary Edgerly	Thursday, October 18, 2001
Ford ASSET Advisors: Bill Routley and Ben Upham	Thursday, October 25, 2001
Chrysler CAP Advisor: Pete Alley	Wednesday, February 20, 2002
Automotive Service Advisor(s): Greg Key	Thursday, April 18, 2002
Automotive Body Advisors: Jim Bigelow and Gary Edgerly	Wednesday, April 10, 2002
High Performance Advisor: Bill Wagner	Wednesday, May 1, 2002
General Motors Advisor: Jim Norrington	Thursday, April 4, 2002
Automotive and Heavy Equip Management Advisor: Mike Ropele	Wednesday, March 27, 2002
Automotive Engineering Advisor(s):	April 2003

FERRIS STATE UNIVERSITY

January 25, 2002

Dear Automotive Advisory Committee Member:

Ferris State University endeavors to provide you with the highest quality automotive service graduates. To be able to meet your present and future needs, we are reviewing the structure of the automotive service program and its curriculum.

Your assistance and input is essential to the review of the Automotive Service Technology program. To help us identify your needs and preferences, please complete ONLY those portions of the survey that are applicable to you as described below.

Your time and effort is appreciated and is important to this process. If you have any questions, please call Greg Key, Department Chair, Automotive Center at (231) 591-5981. Thank you.

Survey Instructions:

A. To help us evaluate our current program and graduates, please review the "Curriculum Guide Sheet" on pages 2 and 3, and complete the survey on pages 4, 5 and 6.

B. This evaluation of our program will help us to determine the need for and receive Vocational Education Funds.

AUTOMOTIVE CENTER
708 Campus Drive, Big Rapids, MI 49307-2281
Phone 231 591-5981 Fax 231 591-5982

College_____

Advisory Committee
(Specify field)_____

ADVISORY COMMITTEE PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

INSTRUCTIONS: Rate each item using the following guide:
EXCELLENT means nearly ideal, top 5 to 10%
GOOD is a strong rating, top one-third
ACCEPTABLE is average, the middle-third
BELOW EXPECTATIONS is only fair, bottom one-third
POOR is seriously inadequate, bottom 5 to 10%

A comment column has been provided if you wish to explain your rating.

	Keypunch Instructions	Poor 1	Below Expectations 2	Acceptable 3	Good 4	Excellent 5	Don't Know	COMMENTS
Please rate each item below:								
1. Instructional program content and quality are:								
• Based on performance objectives that represent job skills and knowledges required for successful entry level employment.	1							
• Designed to provide students with practical job application experience.	2							
• Responsive to upgrading and retraining needs of employed persons.	3							
• Periodically reviewed and revised to keep current with changing job practices and technology.	4							
2. Instructional equipment is:								
• Well maintained.	5							
• Current and representative of that used on the job.	6							
3. Instructional facilities:								
• Provide adequate lighting, ventilation, heating, power, and other utilities.	7							
• Allocate sufficient space to support quality instruction.	8							
• Meet essential health and safety standards.	9							
4. Placement:								
• Services are available to students completing the program.	10							
• Job opportunities exist for students completing the program or leaving with marketable skills.	11							
5. Follow-up studies on program completers and leavers (Students with marketable skills):								
• Demonstrate that students are prepared for entry level employment.	12							
• Collect information on job success and failure of former students.	13							
• Provide information used to review and, where warranted, revise the program.	14							

ADVISORY COMMITTEE PERCEPTIONS OF OCCUPATIONAL EDUCATION PROGRAMS

College _____

Advisory Committee
(Specify field) _____

Please answer the following:

1. What are the major strengths of the college's occupational program in your field(s)?

2. What are the major needs for improvement in the college's occupational program in your field(s)?

3. Do you have additional comments or suggestions for the program or for utilization of the advisory committee? If so, please state briefly.

SECTION 7

LABOR MARKET ANALYSIS

All information in this section is from U.S. Department of Labor Bureau of Labor Statistics, Occupational Projections, and MOIS web sites.

SUMMARY:

As of 1998 the number of Automotive Technicians in the state of Michigan was at approximately 25,300 with average annual openings projected at approximately 860. The projected employment to the year 2008 is approximately 27,550 technicians, which represents a 9.0% increase. This compares to national statistics that show approximately 772,150 technicians employed in 1998 with average annual openings projected at approximately 32,460. The national projected employment to the year 2008 is 904,750, which represents a 17% increase.

The average mean wage for several metropolitan areas around Michigan is estimated at $17.65 per hour. This compares to an estimated national mean wage of $14.80 per hour.

NATURE OF THE WORK:

The ability to diagnose the source of a problem quickly and accurately requires good reasoning ability and a thorough knowledge of automobiles. Many technicians consider diagnosing hard-to-find troubles one of their most challenging and satisfying duties.

The work of automotive service technicians and mechanics has evolved from simply mechanical to high technology. Today integrated electronic systems and complex

computers run vehicles and measure their performance while on the road. Automotive service technicians have developed into diagnostic, high-tech problem solvers. Technicians must have an increasingly broad base of knowledge about how vehicles' complex components work and interact, as well as the ability to work with electronic diagnostic equipment and computer-based technical reference materials.

Automotive service technicians and mechanics use these high-tech skills to inspect, maintain, and repair automobiles and light trucks with gasoline engines. The increasing sophistication of automotive technology now relies on workers who can use computerized shop equipment and work with electronic components, while maintaining their skills with traditional hand tools. Because of these changes in the occupation, workers are increasingly called "Automotive Service Technicians," and the title "Mechanic" is being used less and less frequently.

When mechanical or electrical troubles occur, technicians first get a description of the symptoms from the owner or, if they work in a large shop, the repair service estimator who wrote the repair order. To locate the problem, technicians use a diagnostic approach. First, they test to see if components and systems are proper and secure, and then isolate those components and systems are proper and secure, and then isolate those components or systems that could not logically be the cause of the problem. Technicians may have to test drive the vehicle or use a variety of testing equipment, such as onboard and hand-held diagnostic computers or compression gauges, to identify the source of the problem. These tests may indicate whether a component is salvageable or if a new one is required to get the vehicle back in working order.

Service technicians use a variety of tools in their work. They use power tools, such as pneumatic wrenches to remove bolts quickly, machine tools like lathes and grinding machines to rebuild brakes, welding and flame cutting equipment to remove and repair exhaust systems, and jacks and hoists to lift cars and engines. They also use common hand tools like screwdrivers, pliers, and wrenches to work on small parts and in hard to reach places.

In modern repair shops, service technicians compare the readouts from diagnostic testing devices to the benchmarked standards given by the manufacturer of the components being tested. Deviations outside of acceptable levels are an indication to the technician that further attention to an area is necessary. The testing devices diagnose problems and make precision adjustments with precise calculations downloaded from large computerized databases. The computerized systems provide automatic updates to technical manuals and unlimited access to manufacturers' service information, technical service bulletins, and other information databases, which allow technicians to keep current on trouble spots and to learn new procedures.

WORKING CONDITIONS:

Almost half of automotive service technicians work a standard 40-hour week, but over 30 percent work more than 40 hours a week. Many of those working extended hours are self-employed technicians. To satisfy customer service needs, some service shops offer evening and weekend service. Generally, service technicians work indoors in well-ventilated and lighted repair shops. However, some shops are drafty and noisy. Although they fix some problems with simple computerized adjustments, technicians

frequently work with dirty and greasy parts, and in awkward positions. They often lift heavy parts and tools. Minor cuts, and burns, and bruises are common, but technicians usually avoid serious accidents when the shop is kept clean and orderly and safety practices are observed.

EMPLOYMENT:

Automotive service technicians and mechanics held about 840,000 jobs in 2000. The majority worked for retail and wholesale automotive dealers, independent automotive repair shops, or automotive service facilities at department, automotive, and home supply stores. Others found employment in gasoline service stations; taxicab and automobile leasing companies; Federal, State, and local governments; and other organizations. About 18 percent of service technicians were self-employed.

TRAINING, OTHER QUALIFICATIONS, and ADVANCEMENT:

Automotive technology is rapidly increasing in sophistication, and most training authorities strongly recommend that persons seeking automotive service technician and mechanic jobs complete a formal training program in high school or in a postsecondary vocational school. However, some service technicians still learn the trade solely by assisting and learning from experienced workers.

Many high schools, community colleges, and public and private vocational and technical schools offer automotive service technician training programs. The traditional postsecondary programs usually provide a thorough career preparation that expands upon the student's high school repair experience.

Postsecondary automotive technician training programs vary greatly in format, but normally provide intensive career preparation through a combination of classroom instruction and hands-on practice. Some trade and technical school programs provide concentrated training for 6 months to a year, depending on how many hours the student attends each week. Community college programs normally spread the training over 2 years; supplement the automotive training with instruction in English, basic mathematics, computers, and other subjects; and award an associate degree or certificate. Some students earn repair certificates and opt to leave the program to begin their career before graduation. Recently, some programs have added to their curriculums training on employability skills such as customer service and stress management. Employers find that these skills help technicians handle the additional responsibilities of dealing with the customers and parts vendors.

High school programs, while an asset, vary greatly in quality. The better programs, such as the Automotive Youth Education Service (AYES), with 150 participating schools and more than 300 participating dealers, conclude with the students receiving their technician's certification and high school diploma. Other programs offer only an introduction to automotive technology and service for the future consumer or hobbyist. Still others aim to equip graduates with enough skills to get a job as a mechanic's helper or trainee mechanic.

The various automobile manufacturers and their participating dealers sponsor 2-year associate degree programs at postsecondary schools across the Nation. The Accrediting Commission of Career Schools and Colleges of Technology (ACCSCT) currently certifies a number of automotive and diesel technology schools. Schools update

their curriculums frequently to reflect changing technology and equipment. Students in these programs typically spend alternate 6 – 12 week periods attending class's full time and working full time in the service departments of sponsoring dealers. At these dealerships, students get practical experience while assigned to an experienced worker who provides hands-on instruction and timesaving tips.

The National Automotive Technicians Education Foundation (NATEF), an affiliate of the National Institute for Automotive Service Excellence (ASE), establishes the standards by which training facilities become certified. Once the training facility achieves these minimal standards, NATEF recommends the facility to ASE for certification. The ASE certification is a nationally recognized standard of programs offered by high schools, postsecondary trade schools, technical institutes, and community colleges that train automobile service technicians, collision repair and refinish technicians, engine machinists, and medium/heavy truck technicians. Automotive manufacturers provide ASE certified instruction, service equipment, and current model cars on which students practice new skills and learn the latest automotive technology. While ASE certification is voluntary, it does signify that the program meets uniform standards for instructional facilities, equipment, staff credentials, and curriculum. To ensure that programs keep up with ever-changing technology, repair techniques, and ASE standards, the certified programs are subjected to periodic compliance reviews and mandatory re-certification. NATEF program experts also review and update program standards to match the level of training and skill-level achievement necessary for success in the occupation. In mid-2000, 1,491 high school and postsecondary automotive service technical ASE, of which 1,200 trained automobile service technicians, had certified

training programs 224 instructed collision specialists, and 62 trained diesel and medium/heavy truck specialists.

For trainee automotive service technician jobs, employers look for people with strong communication and analytical skills. Technicians need good reading, mathematics, and computer skills to study technical manuals and to keep abreast of new technology and learn new service and repair procedures and specifications. Trainees also must possess mechanical aptitude and knowledge of how automobiles work. Most employers regard the successful completion of a vocational training program in automotive service technology as the best preparation for trainee positions. Experience working on motor vehicles in the Armed Forces or as a hobby also is valuable. Because of the complexity of new vehicles, a growing number of employers require completion of high school and additional postsecondary training. Courses in automotive repair, electronics, physics, chemistry, English, computers, and mathematics provide a good educational background for a career as a service technician.

There are more computers aboard a car today than aboard the first spacecraft. A new car has from 10 to 15 onboard computers, operating everything from the engine to the radio. Some of the more advanced vehicles have global positioning systems, Internet access, and other high-tech features integrated into the functions of the vehicle. Therefore, knowledge of electronics and computers has grown increasingly important for service technicians. Engine controls and dashboard instruments were among the first components to use electronics, but now, everything from brakes to transmissions and air-conditioning systems to steering systems is run primarily by computers and electronic components. In the past, a specialist usually handled any problems involving electrical

systems or electronics. Now that electronics are so common, it is essential for service technicians to be familiar with at least the basic principles of electronics. Electrical components, or a series of related components, account for nearly all malfunctions in modern vehicles.

In addition to electronics and computers, automotive service technicians will have to learn and understand the science behind the alternate fuel vehicles that have begun to enter the market. The fuel for these vehicles will come from the dehydrogenization of water, electric fuel cells, natural gas, solar power, and other non-petroleum-based sources. Some vehicles will even capture the energy from the brakes and use it as fuel. As vehicles with these new technologies become more common, technicians will need additional training to learn the science and engineering that makes them possible.

Beginners usually start as trainee technicians, mechanics' helpers, lubrication workers, or gasoline service station attendants, and gradually acquire and practice their skills by working with experienced mechanics and technicians. With a few months' experience, beginners perform many routine service tasks and make simple repairs. It usually takes 2 to 5 years of experience to become a journey-level service technician, who is expected quickly perform the more difficult types of routine service and repairs. However, some graduates of postsecondary automotive training programs are often able to earn promotion to the journey level after only a few months on the job. An additional 1 to 2 years' experience familiarizes mechanics and technicians with all types of repairs. Difficult specialties, such as transmission repair, require another year or two of training and experience. In contrast, brake specialists may learn their jobs in considerably less time because they do not need a complete knowledge of automotive repair.

In the past, many persons became automotive service technicians through 3 or 4-year formal apprenticeship programs. However, apprenticeships have become rare, as formal vocational training programs in automotive service technology have become more common.

Employers increasingly send experienced automotive service technicians to manufacturer training centers to learn to repair new models or to receive special training in the repair of components, such as electronic fuel injection or air-conditioners. Motor vehicle dealers also may send promising beginners to manufacturer sponsored mechanic training programs. Employers typically furnish this additional training to maintain or upgrade employee skills and increase their value to the dealership. Factory representatives also visit many shops to conduct short training sessions.

Voluntary certification by Automotive Service Excellence (ASE) has become a standard credential for automotive service technicians. Certification is available in 1 or more of 8 different service areas, such as electrical systems, engine repair, brake systems, suspension and steering, and heating and air conditioning. For certification in each area, technicians must have at least 2 years of experience and pass a written examination. Completion of an automotive training program in high school, vocational or trade school, or community or junior college may be substituted for 1 year of experience. In some cases, graduates of ASE-certified programs achieve certification in up to three specialties. For certification as a master automotive mechanic, technicians must be certified in all eight areas. Mechanics and technicians must retake each examination at least every 5 years to maintain their certifications.

Experienced technicians who have leadership ability sometimes advance to shop supervisor or service manager. Those who work well with customers may become automotive repair service estimators. Some with sufficient funds open independent repair shops.

JOB OUTLOOK:

Job opportunities in this occupation are expected to be very good for persons who complete automotive training programs in high school, vocational and technical schools, or community colleges. Persons with good diagnostic and problem solving skills, and whose training includes basic electronic skills, should have the best opportunities. For well prepared people with a technical background, automotive service technician careers offer an excellent opportunity for good pay and the satisfaction of highly skilled work with vehicles incorporating the latest in high technology. However, persons without formal automotive training are likely to face competition for entry-level jobs. Employment of automotive service technicians and mechanics is expected to increase 10 to 20 percent through the year 2010. The growing complexity of automotive technology necessitates service by skilled workers, contributing to the growth in demand for highly trained mechanics and technicians. Employment growth will continue to be concentrated in motor vehicle dealerships and independent automotive repair shops. Many new jobs will also be created in small retail operations that offer after warranty repairs, such as oil changes, brake repair, air conditioner service, and other minor repairs generally taking less than 4 hour to complete. Fewer national department store chains will provide auto repair services in large shops. Employment of automotive service technicians and

mechanics in gasoline service stations will continue to decline, as fewer stations offer repair services.

In addition to job openings due to growth, a substantial number of openings will be created by the need to replace experienced technicians who transfer to other occupations, retire, or stop working for other reasons. Most persons who enter the occupation can expect steady work, because changes in general economic conditions and developments in other industries have little effect on the automotive repair business.

EARNINGS:

Median hourly earnings of automotive service technicians and mechanics, including commission, were $13.70 in 2000. The middle 50 percent earned between $9.86 and $18.67 an hour. The lowest 10 percent earned less than $7.59, and the highest 10 percent earned more than $23.67 an hour. Median annual earnings in the industries employing the largest numbers of service technicians in 2000 were as follows:

Local government	$16.90
New and used car dealers	16.87
Auto and home supply stores	12.35
Automotive repair shops	12.15
Gasoline service stations	11.86

Many experienced technicians employed by automotive 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 mechanics and technicians a minimum weekly salary. Many master technicians earn from $70,000 to $100,000 annually.

Some automotive service technicians are members of labor unions such as the International Association of Machinists and Aerospace Workers; the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America; the Sheet Metal Workers' International Association; and the International Brotherhood of Teamsters.

Bibliography

National Automotive Technicians Education Foundation, 101 Blue Seal Dr. S.E., Suite 101, Leesburg, VA 20175. Internet: http://www.natef.org

Accrediting Commission of Career Schools and Colleges of Technology, 2101 Wilson Blvd., Suite 302, Arlington, VA 22201 Internet: http://www.accsct.org

Skills USA-VICA, P.O. Box 3000, 1401 James Monroe Hwy. Leesburg, VA 22075. Internet: http://www.skillsusa.org

Automotive Youth Educational Systems (AYES), 2701 Troy Center Dr., Suite 450, Troy, MI 48084. Internet: http://www.ayes.org

ASE, 101 Blue Seal Dr. S.E., Suite 101, Leesburg, VA 20175. Internet: http://www.asecert.org

National Automobile Dealers Association, 8400 Westpark Dr., McLean, VA 22102. Internet: http://www.nada.org

Michigan Colleges and Universities Offering Automotive Mechanic Programs

Region: Michigan's Upper Peninsula

Bay de Noc Community College; 2001 North Lincoln Road; Escanaba, MI 49829-2511
http://www.baydenoc.cc.mi.us

Gogebic Community College; E-4946 Jackson Road; Ironwood, MI 49938
http://www.gogebic.cc.mi.us

Northern Michigan University; 1401 Presque Isle Avenue; Marquette, MI 49855-5301
http://www.nmu.edu

Region: Northwest Michigan

Ferris State University; 420 Oak Street; Big Rapids, MI 49307-2742
http://www.ferris.edu

Kirtland Community College; 10775 North St Helen Road; Roscommon, MI 48653-9699
http://www.kirtland.cc.mi.us

Mid Michigan Community College; 1375 South Clare Avenue; Harrison, MI 48625-9447

Northwestern Michigan College; 1701 East Front Street; Traverse City, MI 49686-3061
http://www.nmc.edu

Region: Northeast Michigan

Alpena Community College; 666 Johnson Street; Alpena, MI 49707-1495
http://www.alpena.cc.mi.us

Delta College; 1961 Delta Road; University Center, MI 48710
Http://www.delta.edu

Region: Southwest Michigan

Glen Oaks Community College; 62249 Shimmel Road; Centreville, MI 49032-9719
http://www.glenoaks.cc.mi.us

Grand Rapids Community College; 143 Bostwick Avenue N.E.; Grand Rapids, MI 49509-3201 http://www.grcc.cc.mi.us

Kalamazoo Valley Community College; PO Box 4070; Kalamazoo, MI 49003-4070
http://www.kvcc.edu

Lansing Community College; PO Box 40010; Lansing, MI 48901-7210
http://www.lansing.cc.mi.us

Southwestern Michigan College; 58900 Cherry Grove Road; Dowagiac, MI 49047-9793
http://www.smc.cc.mi.us

Region: Southeast Michigan

Baker College of Flint; 1050 West Bristol Road; Flint, MI 48507-5508
http://www.baker.edu

Henry Ford Community College; 5101 Evergreen Road; Dearborn, MI 48128-1495
http://www.henryford.cc.mi.us

Jackson Community College; 2111 Emmons Road; Jackson, MI 49201-8399
http://www.jackson.cc.mi.us

Macomb Community College; 14500 Twelve Mile Road; Warren, MI 48093-3896
http://www.macomb.cc.mi.us

Monroe County Community College; 1555 South Raisin Ville Road; Monroe, MI 48161-9047 http://www.monroe.lib.mi.us/mcccc

Mott Community College; 1401 East Court Street; Flint, MI 48503
http://www.mcc.edu

Oakland Community College; 2480 Opdyke Road; Bloomfield Hills, MI 48304-2266
http://www.occ.cc.mi.us

Washtenaw Community College; 4800 East Huron River Drive; PO Box D-1; Ann Arbor, MI 48106 http://www.washtenaw.cc.mi.us

Wayne County Community College; 801 West Fort Street; Detroit, MI 48226
http://www.wccc.edu

SECTION 8

EVALUATION OF FACILITIES AND EQUIPMENT

Facilities

The Automotive Service Technology program started in 1952 in a wing of the Trade and Industrial Center on the Ferris State University campus. When the program began, it occupied approximately 10,600 sq. ft. There was on faculty member and 20 students. The Automotive Service Technology program was the parent program for all the other programs in the Automotive Department.

History

1952	Auto Service
1955	Auto Body
1956	Heavy Equipment Service
	Auto Machine
1988	G.M. ASEP option
1991	Ford ASSET option
1996	Daimler Chrysler CAP option
1971	B.S. Automotive and Heavy Equipment Management
1994	B.S. Heavy Equipment Service Engineering Technology
1996	B.S. Automotive and Heavy Equipment Management Offered at Macomb Community College University Center
2001	Automotive Engineering Technology

Our facility was built in 1956 and should be replaced before it starts effecting our enrollment. Presently the Automotive Service Technology program occupies approximately 57,000 sq. ft. in the Automotive Center building.

One of the major features of the Automotive Service Technology program at Ferris State University is the service floor operation. This 13,300 sp. ft. service shop is designed to operate much like a dealership service department. The vehicles that are worked on in this shop are mainly provided by service customers and the work is done by automotive students and supervised by the faculty.

Technological Equipment/Computers in the Automotive Program

A partial list of tools, manuals, and electronic training materials, along with our vehicle list shows the corporate commitment to the program through equipment donations. For example, this year Chrysler donated $10,000 to the program.

Presently 12 of our 63 vehicles are 1999 pr newer with the rest being 7 years old or newer. The list of vehicles illustrates how we rate them for educational use such as air, cruise, engine, transmissions, etc. We replace the oldest first unless the vehicle has some special system on it that we have very few of. That vehicle may be a year of two older because it might be harder to replace that particular type of vehicle.

We have state of the art computer manual for General Motors, Ford, Chrysler, and an All Data system for all other car lines. A long with the computer system we have a paper manual system as well.

Model	Make	Year	FSU#;	Color	Engine	Trans	ABS	Dash	Cruise	A/C	SRS
			AT #52								
			AT #30								
			AT #23								
			AT #22								
			AT #51								
			AT #57								
			AT #58								
			AT #35								
Audi											
	A4 Quattro A6	1999	AT #11	Red	2.8l	5SPD a	yes	No	Yes	Yes	Yes
Chrysler											
	300M	1999	AT #09	white	3.5L	Auto St	Yes	No	Yes	Yes	Yes
	Prowler	2000	AT #41	red	3.5L	Auto	No	No	Yes	Yes	Yes
	PT Cruser	2000	AT #63	Red	2.4L	5spd m	Yes	NO	Yes	Yes	Yes
DODGE											
	1500 Pick-up	2002	AT #64	Black	4.7L V	4spd au	Yes	No	Yes	Yes	Yes
	2500 P/U	1995	AT #04	Red	V-10	4spd	Yes	No	Yes	Yes	Yes
	Durango	1998	AT #07	green	5.9L	3spd O	Yes	No	Yes	Air	Yes
	Durango	1998	AT #53	Silver	5.2L	Auto	Yes	No	Yes	A/C	Yes
	Intreped	2000	AT #62	Black	3.2	autostic	Yes	No	Yes	Yes	Yes
	Intrepid	1998	AT #08	white	3.2L	5spd	Yes	No	Yes	Yes	Yes
	Neon	1999	AT #03	red	2.0L	AUTO	no	yes	yes	yes	Yes
	Ram Red PU	1998	AT #12	red	5.2	Auto	Yes	No	Yes	Yes	Dual
	Srtatus	2001	AT #13	Black	2.4L	4spd au	Yes	No	Yes	Yes	Yes
	Viper	2001	AT #17	Red	V-10	6spd m	No	No	No	Yes	Yes
Jeep											
	Grand Cherokee	1999	AT #49	BURG	4.7	AUTO	YES	NO	YES	YE	YES
	Grand Cherokee	1999	AT #28	Platinum	4.7	4spd au	yes	no	yes	yes	yes

Model	Make	Year	FSU#;	Color	Engine	Trans	ABS	Dash	Cruise	A/C	SRS
	Liberty	2001	AT #65	Black	3.7L V	3spd au	Yes	No	Yes	Yes	Yes
	Wrangler	1997	At #10	White	2.5l	5spd	No	No	No	No	Yes
	Wrangler	1997	AT #29	green	4.0L	AUTO	Yes	Yes	NO	YE	YES
FORD											
	Contour	1998	AT #48	Black	2.5L	5spd M	Yes	No	Yes	Air	Yes
	Cougar	1999	AT #79	Red	2.0L	4spd	No	No	Yes	Yes	Yes
	Crown Victoria	1996	AT #43	burgandy							
	E150 Van Storage ve	1996	AT #24	red							
	E250 Diesel Van	1996	AT #36	blue	7.3 DI	Auto	Rear	No	No	No	Yes
	Escort	1998	AT #69	Silver	2.0L	4spd o	No	No	Yes	Yes	Yes
	Explorer	1996	AT #44	green	4.0L	Auto	Yes	No	Yes	Air	Yes
	F150 4x4	1997	AT #45	grey	4.6L	5spd M	Yes	No	Yes	Air	Yes
	Mustang	2001	AT #54	Yellow	3.8L	Auto	No	No	Yes	Air	Yes
	Ranger 4X2	1996	AT #33	green	4.0L		No	No	Yes	No	No
	Ranger 4X4	1992	AT #05	red/silver	4.0L	AXOD		No		Air	No
	taurs gl	1996	AT #37	red							
	Thunderbird	1996	AT #42		4.6l	Auto	Yes	Yes	Yes	Yes	Yes
	Windstar	1995	AT #21	lt blue	3.8L	ATOD	No	No	Yes	Air	Yes
Lincoln											
	Lincoln Continental	1995	AT #47	green	4.6L	ATOD	Yes	Yes	Yes	Air	Yes
	Towncar	1996	AT #02	pearl	4.6L	AXOD	Yes	No	Yes	AC	Yes
Buick											
	Buick Regal GS	1997	AT #40	burgandy	3800	5spd	Yes	No	Yes	Yes	Yes
	Buick Rivera	1998	AT #32	green	3.8 S/	4sp aut	Yes	No	Yes	Yes	yes
	LeSabre	2000	AT #19	pewter	3800	Auto O	Yes	No	Yes	Yes	Yes
	Regal	1999	AT #06		3800	ATOD	Yes	Yes	Yes	Air	yes
Cadillac											
	DeVille	1999	AT #38	teal	4.6L	5spd	Yes	No	Yes	Yes	Yes
Chevy											
	Blazer	1998	AT #56	gray	4.3L	4spd au	Yes	No	Yes	Yes	Yes
	Corvette	1995		red	5.7L	6 spd.	N	YES	yes	yes	yes

Model	Make	Year	FSU#;	Color	Engine	Trans	ABS	Dash	Cruise	A/C	SRS
	excab pick-up4x4	1998	AT #15	lt blue	5.7L	4spd A	Yes	No	Yes	No	Dual
	Impala	2000	AT #88		3.8L	4SPD	Yes	No	Yes	Yes	Yes
	Malibu	1998	AT #20	White	2.4L	Auto	Yes	No	Yes	Yes	Yes
	pick-up	1998	AT #14	green	5.7L	auto	Yes	No	Yes	No	Yes
	Silverado X-Cab PU	2000	AT #89		5.3L	3SPD	Yes	No	Yes	Yes	Yes
	Suburban	1996	AT #26	white	5.7L	Auto	Yes	No	ves	Yes	Yes
	Tahoe	2001	AT #82	Silver	5.3l	4spd au	Yes	No	Yes	Yes	Yes
	Venture	1997	AT #05-	silver	3400 S	AUTO	Yes	No	Yes	Yes	Yes
GMC											
	P/U Truck	1998	AT #50	green	5.7	4-auto	Yes	No	Yes	Air	No
	Savana Van	1998	AT #34	BURG	5.7	AUTO	YES	NO	YES	YE	YES
	Sierra	2001	AT #39	white	8100	6spd	Yes	No	No	Yes	Yes
	Sonoma	2000	AT #87	BLACK	2200	5SP M	YES	NO	YES	YE	YES
Olds											
	Alero	1999	AT #59	gold	3400	4spd au	Yes	No	Yes	Yes	Yes
	Intrigue	1998	AT #31		3800 II	Auto	Yes	No	Yes	Yes	Yes
Pontiac											
	Bonneville	1995	AT #16	green	3.8L	4spd A	Yes	No	Yes	Yes	Yes
	Grand Am	1999	AT #25	Silver	3.4L	4spd	Yes	No	Yes	A/C	Dual
	Grand Prix	1999	AT #18	RED	3.8L	Auto O	YES	No	YES	Yes	Yes
	Montana	2000	AT #46	RED/GR	3400	4-SP/O	YES	NO	YES	YE	YES
Saturn											
	Saturn	1999	AT #61	green	1.9L	4spd au	no	ves	no	ves	ves
	Saturn	1999	AT #27	white	1.9 OH	5spd m	no	ves	Yes	ves	Yes
NISSAN											
	Altima GLE	2001	AT #66	Pewter	2.4L	3spd au	Yes	No	Yes	Yes	Yes
	D-21 Pick-up	1996	AT #60	red	2.4L	3spd O	No	No	Yes	Air	Yes
	Extera SE	2001	At #68	Bronze	3.3L	4spd au	Yes	No	Yes	Yes	Yes
	Frontier EX cab P/U	2001	AT #67	Red	3.3L	5spd M	YesY	No	Yes	Yes	Yes
	Quest	1996	AT #55	blue	3.0L	4spd					

AUTOMOTIVE SERVICE TECHNOLOGY BASIC TOOL LIST

All automotive students are required to provide their own hand tool set. The following list of tools will serve as a guide for Automotive Service Technology students. Students in G.M. ASEP and the Ford ASSET program have their own specific tool requirements. These tools may be purchased from any vendor and substantial discounts are available to students. Ferris State University does not sell tools.

The complete tool list is shown first. Because not all-beginning students take the same automotive classes when starting the program, the second list indicates tool requirements by the individual course. Tools may be purchased over a period to match the course requirements. All tools and the upper and lower toolboxes are required by the beginning of the third semester.

Safety Equipment & Uniforms

1 Pair leather work shoes

4 Work uniforms (light blue with names and dark blue work pants)

2 Fender covers

1 Seat cover (can substitute with large beach towels)

1 Pair welding goggles

1 Pair welding gloves

1 Pair soft fame safety goggles

1 Pair safety glasses

Complete Tool List

1 Pliers -wire stripper/crimper

1 Pocket Screw Driver

1 3/8" drive metric socket set 8mm-19mm (deep & shallow)

2 3/8" drive spark plug sockets-1-13/16" & 1-5/8" (Flex)

1 17 piece ½" drive socket set 12mm-24mm (deep & shallow)

1 ¼ drive socket set metric

1 Combination wrench set 5/16" to 1"

1 Metric combination wrench set 7mm to 21mm

1 Torque wrench 0 to 200 ft/lb capacity (prefer dial type)

1 Metric flare nut wrench set - 6 pieces -9mm to 21mm

1 Screwdriver set including 4 standard, 4 Phillips #1,2,3,4

1 Metric Allen wrench set

1 Allen Wrench Set (standard)

1 Jumper Wires (Assortment)

1 Package of Tee Pins

1 Golf Tees (Assortment)

1 Pliers- slip joint

1 Pliers- needle nose

1 Pliers- diagonal wire cutters

1 Pliers-9" channel lock type

1 Pliers-6" vice grip

1 Pliers-10" vice grip

3 Ball peen hammers- 8 oz , 20 oz and 24 oz

1 Plastic tip hammer

1 Medium size dead blow

1 16" pry bar (Lady Slipper Type)

1 Brass drift-6"

1 Scratch awl

1 Gasket scraper

1 6" steel rule (1/32 & mm scale)

1 Tire gauge

1 Steel tape 12 ft. long

1 Small flash light

1 Hand operated vacuum pump with gauge

1 Battery terminal cleaner (top post)

1 Battery terminal puller

1 HEI sparkplug tester

1 Test light-circuit powered (high impedance)

1 DVOM (Fluke Series 87 Multimeter , Fluke Series 88 Multimeter or equivalent, minimum standard- should have frequency capabilities)

1 Brake spring hold down tool

2 Brake adjusting tools

1 Brake return spring removing and installing tool

1 Brake bleeder hose, (3/16" dia. clear plastic tubing)

1 set torx bits-3/8" drive set (T27, 30,40,45,55 & GM 50) Torx sockets (E8, 10,12,14, &16)

1 Professional top tool chest-5 to 10 drawer

1 Professional roll away tool cabinet 3 to 7 drawer with lock

1 Wire wheel brush (to use with drill motor)

1 Wire spark plug gap gauge

1 Chisel holder

1 Punch set (5/16" center punch, ¼" starter punch, 3/16" & 5/16" pin punch)

1 Chisel set (3/8", ½" & ¾")

1 Anti freeze tester

1 3/8" drive in/lb torque wrench (O to 50 in/lb)

1 External snap ring pliers

1 Internal snap ring pliers

1 Spark plug boot-removing pliers

1 Tire air chuck with aero fittings

1 Valve core removing tool

1 Hack saw with assorted blades

1 Air blow gun with rubber tip and aero fittings

4 Files, 2 flat, 1 - 3/8" x 10" round, 1 - 3 cornered 10"

2 File handles

1 Pump oil can

1 Parts cleaning brush-nylon

1 Wire brush

Optional Tool List

1 Set 3/8" drive flex sockets (10mm to 17mm)

1 Pliers - 16" channelock type

1 Set 1/2" drive shallow six-point impact metric socket set (15mm to 22mm)

1 Fluke model 88 multimeter (upgrade of series 87)

1 Wire terminal tool kit (TT 600 Snap-On or similar)

1 3/8" Air ratchet

1 ½" Impact wrench

1 Telescoping magnetic pick-up tool

1 O2 Sensor socket

1 3/4", 13/16", 19mm lug nut deepwell sockets

1 32 or 48 oz Hammer

1 Pipe wrench

Tool Requirements by Courses
NOTE: SOME TOOLS ARE, REQUIRED IN MORE THAN ONE COURSE

AUTO 111 Manual Transmissions & Drivelines

Tools in lab - no student tools required

AUTO 112 Brakes and Suspension Systems I

Tools in lab - no student tools required

AUTO 113 Automotive Electricity and Electronics

1 Screwdriver set including 4 standard, 4 Phillips, 4 Posi Drive #1,2,3,4

1 Torx driver set - 12 piece (screwdriver type)

1 Pliers -wire stripper-crimper

1 Pair safety glasses

1 Test light - circuit powered (high impedance)

1 DVOM (Fluke Series 87 Multimeter or equivalent, minimum standard - should have frequency capabilities)

1 Pocket Screwdriver

1 Small Flash Light

AUTO 114 Automotive Engines

1 Feeler gauge set (must include a .0015 gauge)

1 3/8" drive metric socket set 8mm - 19mm (deep & shallow)

2 3/8" drive spark plug Flex sockets - 13/16" & 5/8"

1 17 piece 1/2" drive socket set 12mm - 24mm (deep)

1 Metric combination wrench set 7mm to 22mm

1 Torque wrench 0 to 150 ft/lb capacity (prefer dial type)

1 Metric flare nut wrench set - 6 pieces - 9mm to 21mm

1 Screwdriver set including 4 standard, 4 Phillips #1, 2, 3, 4

1 Metric Allen wrench set

1 Torx driver set - 12 piece (screwdriver type)

1 Pliers - slip joint

1 Pliers -needle nose

1 Pliers -diagonal

1 Pliers - 9" channel lock type

1 Pliers - 6" vice grip

1 Pliers - 10" vice grip

2 Ball peen hammers - 8 oz and 20 oz

1 Plastic tip hammer

1 Pair safety glasses

1 Gasket scraper

1 6" steel rule (1/32 & mm scale)

1 Piston ring compressor

1 16" Pry Bar (Lady Slipper Type)

1 Small flash light

1 Set torx bits - 3/8" drive set (T27, 30, 40, 45, 55 & GM50) Torx sockets (E8, 10, 12, 14, & 16)

1 Professional top tool chest - 5 to 10 drawer

1 1/4 drive socket set - metric

1 Pair leather work shoes

Torque Angle Gauge (Snap-On TA-360 Equivalent)

AUTO 115 Brakes & Suspension Systems II

Tools in lab - no student tools required

AUTO 116 Engine Electrical Systems

1 1/4 drive socket set - regular and metric

1 Combination wrench set 3/8 " to 1"

1 Metric combination wrench set 4mm to 22mm

1 Screwdriver set including 4 standard, 4 Phillips, 4 Posi Drive #1, 2, 3, 4

1 Pliers -needle nose

1 Pair safety glasses

1 Small flash light

1 Hand operated vacuum pump with gauge

1 HEI sparkplug tester

1 Test light - circuit powered (high impedance)

1 DVOM (Fluke Series 87 Multimeter or equivalent, minimum standard - should have frequency capabilities)

AUTO 117 Electronic Fuel Management Systems

1 18 piece 3/8" drive socket set (US deep-six point)

1 3/8" drive metric socket set 8mm - 19mm (deep & shallow)

2 3/8" drive spark plug sockets – 1-13/16" & 1-5/8"

1 Combination wrench set 3/8" to 1"

1 Metric combination wrench set 4mm to 22mm

1 Metric flare nut wrench set - 6 pieces - 9mm to 21 mm

1 Screwdriver set including 4 standard, 4 Phillips, 4 Posi Drive#1,2,3,4

1 Metric Allen wrench set

1 Torx driver set - 12 piece (screwdriver type)

1 Pliers -needle nose

1 pliers -diagonal

1 Pliers -wire stripper-crimper

1 Scratch awl

1 Pair safety glasses

1 Small flash light

1 Pocket Screw Driver

1 Hand operated vacuum pump with gauge

1 HEI sparkplug tester

1 Test light - circuit powered (high impedence)

1 DVOM (Fluke Series 87 Multimeter or equivalent, minimum standard - should have frequency capabilities)

1 Set torx bits - 3/8" drive set (T27,30,40,45,55 & GM50) Torx sockets (E8,10,12,14,&16)

CBT Tapes

New Number	Title	
CBT 043	Rear Axle & Propeller Shaft	
·016	Specialized Engine Repari 16013.all -S-CD	
CBT 031	Entertainment Systems I	
CBT 032	Entertainment Systems II	
CBT 009	Install Disk for CBT Training	
CBT 040	Body-on-frame- Structural Repair	
CBT 042	Vibration Correction	
CBT 046	Waterleak and Windnoise Repair	
CBT-048	SI2000 Overview	10040.00w
CBT 017	Intro to Air Conditioning 11044.00	11044.00
CBT 017B	Intro to Air Conditioning 11044.00	11044.00
CBT 019B	Advanced HVAC Systmes Diagnosis 11045.10w	11045.10W
CBT 019	Advanced HVAC Systmes Diagnosis 11045.10w	11045.10W
CBT 026B	Steering Service 13041.10 W	13041.10W
CBT 026	Steering Service 13041.10 W	13041.10W
·007B	Chassis Electronics 13043-10W	13043-10W
CBT 007	Chassis Electronics 13043-10W	13043-10W
CBT 010	AWD, 4Wd & Auto 4WD 14043-10W	14043-10W
CBT 010B	AWD, 4Wd & Auto 4WD 14043-10W	14043-10W
CBT 036	Foundation Brakes / ABS Systems Service 15045.10W	15045.10W
CBT 025B	Bosch 5 Series ABS / TCS 15045.20W	15045.20W
CBT 025	Bosch 5 Series ABS / TCS 15045.20W	15045.20W
CBT 029	4WAL ABS 15045.30W	15045.30W
CBT 045	Delphi Chassis Series 15045.40w	15045.40W
CBT 033B	OBD II 16040.02W	16040.02W
CBT 033A	OBD II 16040.02W	16040.02W
CBT 013	Battery, Chargine & Starting 16041.01W-r2	16041.01W-r2
CBT 041	Engine Mechanical/Diagnosis/Measurement	16043.50w
CBT 023B	GM Powertrain Performance II 16044-10w2	16044-10W2
·023	GM Powertrain Performance II 16044-10w2	16044-10W2
CBT 022B	GM Powertrain Performance I 16044.10w1	16044.10W1

New Number	Title	
CBT 022	GM Powertrain Performance I 16044.10w1	16044.10W1
CBT 018B	Diesel Engine Performance 2001 16045.21	16045.21
T 018	Diesel Engine Performance 2001 16045.21	16045.21
CBT 030	6.5L Diesel Engine 16046.10W	16046.10W
CBT 001	Tech II Familiarization 16048.15w	16048.15w
CBT 014	1997-2002 Bi Fuel Vehicles: Mixer-based fuel systems 1624	16240.30W
CBT 014B	1997-2002 Bi Fuel Vehicles: Mixer-based fuel systems 1624	16240.30W
CBT 034A	GM Powertrain Preformance III 16804.10w3	16804.10W3
CBT 034B	GM Powertrain Preformance III 16804.10w3	16804.10W3
CBT 008	Auto Trans / Transaxle Diagnositcs 17041.20W	17041-20W
CBT 008B	Auto Trans / Transaxle Diagnositcs 17041.20W	17041.20W
CBT 020B	4T40-E Automatic Transaxle 17041-26w	17041.26W
CBT 020	4T40-E Automatic Transaxle 17041-26w	17041.26W
CBT 012	4L60-E Automatice Transmission 17041.27W	17041.27W
CBT 012B	4L60-E Automatice Transmission 17041.27W	17041.27W
CBT 021	4L80-E Automatic Transmission 17041.29w	17041.29W
T 021B	4L80-E Automatic Transmission 17041.29w	17041.29W
CBT 015	4T80-E Automatic Transaxle 17041.30W	17041.30W
CBT 015B	4T80-E Automatic Transaxle 17041.30W	17041.30W
CBT 011B	4T65-E Automatice Transaxle 17041.32w	17041.32W
CBT 011	4T65-E Automatice Transaxle 17041.32w	17041.32W
CBT 024	NV3500 Manual Transmission 17043.10w	17043.10W
CBT 024B	NV3500 Manual Transmission 17043.10w	17043.10W
CBT 010a	NV4500 Manual Transmission 17043.20	17043.20
CBT 010aB	NV4500 Manual Transmission 17043.20	17043.20
CBT 004	Electrical/Electronics/ Stage 1 18043.01wk	18043.01WK
CBT 005B	Electrical/Electronics/ Stage 2 18043.02w	18043.02W
CBT 004B	Electrical/Electronics/ Stage 1 18043.01wk	18043.02W
CBT 005	Electrical/Electronics/ Stage 2 18043.02w	18043.02W
CBT 006B	Electrical/Electronics/ Stage 3 18043.03w	18043.03W
T 006	Electrical/Electronics/ Stage 3 18043.03w	18043.03W
BT 038	Body Controller 18043.16W	18043.16W

New Number	Title	
CBT 028	Security Systems 19047.06W	19047.06W
CBT 028B	Security Systems 19047.06W	19047.06W
⊐Γ-047	Structural Damage Analysis and Correction	22043-25W
CBT 037	Body Structural Analysis & Alignment 22043.20W	22043.20W
CBT 039	Unibody Structural Repair 22043.29W	22043.29W
CBT 027	GM Airbag Systems 22048.22W	22048.22W
CBT 027B	GM Airbag Systems 22048.22W	22048.22W
CBT 044	Meduim Duty Truck Air Brake Systems 95040.10W	95040.10W
CBT 002	Tech II Familiarization C6018.15	C6018.15
CBT 003	Understanding Automatic Transmissions C7000.00	C7000.00

Student Videos

Old Number	New Number	Title	Category
SEP1		3.4 Liter Engine Mechanical	Engine
06-64	???	GM IM 240	Electrical
misc6	?1	Listening Skills, OnStar, Catera Service, Parasitic Power Drains	Electrical
misc7	?2	Rain Sense, Customers as Partners, Catera	Electrical, Misc
A1	A 001	Advanced Electrical Principles	Electrical
A2	A 002	Understanding Electricity	Electrical
A3	A 003	The Basics fo Emission Controls	Electrical
A4	A 004	Using the Digital Volt-Ohm Meters	Electrical
A5	A 005	Using the PGM Tester	Electrical
A6	A 006	Electrical Components	Electrical
A7	A 007	Electrical Troubleshooting Procedures Part 2	Electrical
A8	A 008	Tuning on Audio Diagnosis	Electrical
A9-1	A 009	Analyzing ETM Schematics	Electrical
A9-2	A 010	Analyzing ETM Schematics	Electrical
A10	A 011	Manual Transmission Principles of Operation	Transmission
	A 012	Automatic Transmission Troubleshooting	Transmissi
A12	A 013	Automatic Transmission Principles of Operation	Transmission
A13	A 014	Anti-lock Brakes Principles of Operation	Brake
A14	A 015	ABS Servicing Part 1	Brake
A15	A 016	ABS Servicing Part 2	Brake
A16	A 017	Troubleshooting Alignment Problems	Brake
A17	A 018	Troubleshooting Wheel and Tire Vibrations	Brake
A18	A 019	Troubleshooting Squeks & Rattles	Body
A19	A 020	Air Conditioning Troubleshooting - Refrigerant System	Body
A20	A 021	Individualized Skills Training	Miscellaneous
A21	A 022	Writing Repair Orders	Miscellaneous
C01	C 001	Instrument Panel Service Follwing Air Bag Deployment	electrical
C02	C 002	alignment & Suspension Update 93	Brake
C03	C 003	MMC Antilock Brake Update	Brake
C04	C 004	New Dodge Ram Pick-Up Engine Update - V 10 and Cummins Diesel	Engine

Old Number	New Number	Title	Category
C05	C 005	OBD II and DRB III (94)	electrical
C06	C 006	Neon ABX - 4 ABS (94)	Brake
C07	C 007	Noise, Vibration, and Harshness (94)	Miscellaneous,
C08	C 008	Neon Wiring Diagram Update (94)	Electrical
C09	C 009	MMC Air Bag System Diagnosis & Service (94)	Electrical
C10	C 010	95 Chrysler Service/Dodge Stratus -- Technical Highlights (95)	Miscellaneous
C11	C 011	95 Dodge Avenger/Chrysler Sebring -- Technical Highlights (95)	Miscellaneous
C12	C 012	New Vehicle Prep Procedures (94)	Miscellaneous
C13	C 013	Speed Variable Power Steering (95)	Brake
C14	C 014	Ram Club Cab and Getrag Transmission (94)	Transmission
C15	C 015	Neon Sealing (94)	Body
C16	C 016	2.5 Liter Engine Service Procedures (94)	Engine
C17	C 017	2.4 liter Engine Service (95)	Engine
C18	C 018	95 Jeep Cherokee Airbag System (94)	Body
C19	C 019	4ITE and 42LE Advanced Diagnosis	Transmission
C20	C 020	R134A Leak Detection and R12 System Adaptation	Body
C21	C 021	4ITE and 42 LE Update (96)	Transmission
C22	C 022	DRB III Update (95)	Electrical
C23	C 023	Engine Measurement (95)	Engine
C24	C 024	ABS Symptom Diagnosis - Bendix Antilock 9 & 10 systems (95)	Brake
C25	C 025	Making and Interpreting Data Recordings with Co-Pilot (95)	Electrical
C26	C 026	OBD II (95)	Electrical
C27	C 027	Grand Cherokee Body Electrical Part 2 (96)	electrical
C28	C 028	Fuel Basics (96)	Electrical
C29	C 029	HEADLAMP AIMING & OPERATION (96)	ELECTRICAL
C30	C 030	NVH REAR WHEEL DRIVE & FOUR WHEEL DRIVE	TRANSMISSIO
C31	C 031	DRB III MULTIFUNCTION PEP MODULE (96)	ELECTRICAL
C32	C 032	LEAK DETECTION PUMP (96)	ELECTRICAL
C33	C 033	97 DAKOTA HIGHLIGHTS (96)	MISCELLANE
C34	C 034	97 NEW MODEL HIGHLIGHTS (96)	MISCELLANE
C35	C 035	FRONT AND REAR AXLE SERVICE (97)	TRANSMISSIO
C36	C 036	CHASSIS DYNAMICS DIAGNOSIS (97)	BRAKE

TOTAL OVERLO/ ADJUNCTS AND TEMPORARY COURSE LOADS
(INCLUDING FSU CLUDING SABBATICAL REPLACEMENTS AND VACANT POSITIONS)

Data for FY 2003-2005 Institutional Planning Cycle ("UAP's")

To be revised after Fall 2001 enrollment is known and AY 2001-2002 overloads, etc. are better defined.

April 24, 2001

AREA	PRIORITY FOR ADDED POSITION	ACTUAL AY 2000-2001 Credits/ Contacts	ACTUAL AY 2000-2001 FTEF See Note	PROJECTED AY 2001-2002 Credits/ Contacts	PROJECTED AY 2001-2002 FTEF See Note	REMARKS
HEET		28/58	1.94	22/32	0.92	Curriculum change will reduce overloads
AUTO		29/53	1.47	37/77	2.14	
CTMG		33/37	1.38	30/37	1.25	Accreditation issue
MFGT		9/33	0.92	16/34	0.94	Primarily MFGT 150 (related course)
SURE		16/32	0.89	17/33	0.92	Accreditation issue
PLTS		14/16	0.58	13/16	0.54	
MECH		13/15	0.54	17/17	0.71	
WELD		12/18	0.50	17/37	1.03	AY 2001-2002 based on enrollment projections (increases)
CDTD		12/14	0.50	13/17	0.54	
MFGE		9/9	0.38	4/4	0.17	
PDET		7/7	0.29	11/17	0.47	
ATFM		3/3	0.25	7/8	0.29	
HVAC		5/5	0.21	1/2	0.06	
EECN		4/4	0.17	19/27	0.79	AY 2001-2002 based on enrollment projections (increases), impact of related courses
MATL		2/4	0.11	2/4	0.11	
RUBR		1/3	0.08	1/1	0.04	
PDGI		None		6/6	0.25	AY 2001-2002 based on enrollment projections (increases)
ABOD		None		None		
AHEM		None		None		
TOTAL			10.21		11.17	

NOTE: FTEF is based on the greater of credits or contact hours.

Automotive Center New Students

	AHM	AET	AUSV	ABOD
1994	33		50	28
1995	38		68	18
1996	41		78	27
1997	25		87	21
1998	34		79	31
1999	37		92	16
2000	35		83	22
2001	44	37	85	17
Totals	**287**	**37**	**622**	**180**
Average	**36**	**37**	**78**	**23**

Fall 2000 Enrollment Comparison

Programs	Fall 1999	Fall 2000	+/-
ABOD	39	37	-2
AUSV	162	183	+21
AHM	79	81	+2
Total	280	301	+21

Fall 2001 Enrollment Comparison

Programs	Fall 2000	Fall 2001	+/-
AET	0	37	+37
ABOD	37	34	-3
AUSV	183	158	-25
AHM	81	85	4
Total	301	314	13

Fall Enrollment

	Fall 2000		Fall 2001		Fall 2002
AUTO	301		314		338
PLTT	277		251		
CONM	250		241		
	828	42.5%	806	41.5%	338
MECH	170		200		
EET	161		165		
	331	17.0%	365	18.8%	
HVAC	134		124		
WELD	125		116		
PRINT	111		118		
MFGT	110		100		
HEQT	107		109		
ARC	103		111		
SURE	97		93		
	787	40.4%	771	39.7%	
TOTALS	1946	100.0%	1942	100.0%	

Fall 2002 Enrollment Comparison

Programs	Fall 2000	Fall 2001	Fall 2002
AET	0	37	59
ABOD	37	34	39
AUSV	183	158	160
AHM	81	85	80
Total	301	314	338

Automotive Enrollment

Program	1996	1997	1998	1999	2000	2001	2002	2003
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total AS & AET	129	148	161	162	183	195	210-220	230-245
Total Auto Dept	230	250	260	280	301	314	338	350

College of Technol

Fall 2000 - Fall 2001 Enrollment Comparision

On-Campus Technical Students Enrolled in the Major Only

Programs	Fall 2000	Fall 2001	+/-	Programs	Fall 2000	Fall 2001	+/-
ARCH	78	85	7	MFGT	60	55	-5
FMAN	25	26	1	MFGE	50	45	-5
Total	**103**	**111**	**8**	**Total**	**110**	**100**	**-10**
ABOD	37	34	-3	CDTD	68	70	2
AUSV	183	158	-25	MECH	49	67	18
AET	0	37	37	MECE	0	11	11
AHM	81	85	4	PDET	53	52	-1
Total	**301**	**314**	**13**	**Total**	**170**	**200**	**30**
BCTM	28	25	-3	RUBT	53	42	-11
CETM	11	9	-2	RUBE	6	8	2
CONM	112	134	22	PLTT	138	127	-11
CMCT	13	9	-4	PLTE	80	74	-6
CMBT	87	64	-23	**Total**	**277**	**251**	**-26**
Total	**251**	**241**	**-10**				
EEIT	55	42	-13	PDGI	79	68	-11
CNS	64	87	23	PMGT	25	30	5
EEET	42	36	-6	NMPP	7	20	13
Total	**161**	**165**	**4**	**Total**	**111**	**118**	**7**
HEQT	79	71	-8	SURT	15	19	4
HEET	28	38	10	SURE	82	74	-8
Total	**107**	**109**	**2**	**Total**	**97**	**93**	**-4**
HVAR	68	68	0	WELT	73	66	-7
HVAC	66	56	-10	WELE	52	50	-2
Total	**134**	**124**	**-10**	**Total**	**125**	**116**	**-9**
Total On-Campus Technical Students Enrolled in the Major Only							
Net Change of On-Campus Technical Students Enrolled in the Major Only							

DEPARTMENT: Automotive								
Faculty Loads								
Academic Year Fall 2002 & Winter 2003								
Program:	Automotive Service							
Name	Fall Semester Assignments:			Winter Semester Assignments:				
	Course	Credits	Configuration	Course	Credits	Configuration	Totals	
Alley	Auto112 241/242	4	3+3	Auto 118 241	4	3+3	8	12
	auto 112 242	1	0+3	auto291 404	2	0	3	3
	Auto114 221	4	3+3	Cord	3	0	7	6
	Cord	3	0	Auto 115 221/212	4	3+3	7	6
				Auto 115 222	1	0+3	1	3
		12	15		14	15	26	30
Billings	Auto117 211/212	4	3+3	Auto 460 211/212	4	3+2	8	11
	Auto 117 212	1	0+3	Auto 460 212	1	0+2	2	5
	Auto213 211/212	4	3+2	Auto213 211/212	4	3+2	8	10
	Auto 213 212	1	0+2	Auto213 221	4	3+2	5	7
				Auto 213 222	1	0+2	1	2
		10	18		14	19	24	35
Bonning	Auto200	6	18	Auto200	6	18	12	36
FT Temp	Auto250	6	18	Auto 250	6	18	12	36
Hachman	Auto250	6	18	Auto200	6	18	12	36
Key	Auto 113 241/242	4	3+3	Auto 480 211/212	4	3+2	8	11
	Auto 113 242	1	0+3	Auto 480 212	1	0+2	1	2
Dept Chair		5	9		5	7	10	16
Leonard	Auto111 221/222	4	3+3	Auto 116 221/222	3	3+0	7	9
	Auto 111 222	1	0+3	Auto 117 211/212	4	3+3	5	6
	Auto 111 211/212	4	3+3	Auto 117 212	1	0+3	5	9
	Auto111 212	1	0+3	Auto111 211	1	0+3	2	6
				Auto 111 212	1	0+3	1	6
		10	18		10	18	20	36
Normington	Auto 113 211/212	4	3+3	Auto116 231/232	4	3+3	8	12
	Auto 113 212	1	0+3	Auto 116 232	1	0+3	2	6
	Auto 214 211	4	3+2	Auto214 211/212	4	3+2	8	10
	Cord	3	0	Auto 214 212	1	0+2	4	2
				Auto291401	2	0	2	0
				Auto291402	2	0	2	0
				Cord	3	0	3	0
		17	14		17	16	29	30
Upham	Auto11[illegible]		3+3	Auto213 231/232	4	3+2	8	11
	Auto 115 222	1	0+3	Auto 213 232	1	0+2	2	5
	Auto117 221/222	4	3+3	Auto214 241/242	4	3+2	8	11
	Auto 117 222	1	0+3	Auto 214 242	1	0+2	2	5
	Cord	3	0	Auto291 403	2	0	5	0
				Cord	3	0	3	0
		13	18		15	14	28	32
Slizinski				Auto116 211/212	4	3+3	4	6
	Auto113 231/232	4	3+3	Auto 116 212	1	0+3	5	9
	Auto 113 232	1	0+3	Auto116 221	1	0+3	2	6
	FSU 100	1	1+0	Auto117 221	4	3+3	5	7
	FSU 100	1	1+0	Auto117 222	1	0+3	2	4
	FSU 100	1	1+0	Auto116 222	1	0+3	1	1
		8	12		12	24	20	36
Tuuri	Auto211 211/212	4	3+3	Auto211 211	4	3+3	8	12
	Auto 211 212	1	0+3	Auto211 221	4	3+3	5	9
	Auto211 221/222	4	3+3	Auto 211222	1	0+3	5	9
	Auto 211 222	1	0+3				1	3
		10	18		9	15	19	33
Dixon	Auto112 231/232	4	3+3	Abod 215 211/112	4	3+2	8	11
	Auto 112 232	1	0+3	Auto214 221/222	4	3+2	5	8
	Auto112 211/212	4	3+3	Auto 214 222	1	0+2	5	8
	Auto 112 212	1	0+3	Auto214 231	4	3+2	5	8
		10	18		13	17	23	35
Wagner	Auto114 211	1	0+3	Auto111 211/212	3	3+0	7	9
	Auto 114 212	1	0+3	Auto114 221/222	4	3+3	5	9
	Auto114 241	4	3+3				5	9
	Auto310 001	3	3+0	Auto320 001	3	3+0	6	6
	Auto 310 002	3	3+0	Auto 320 002	3	3+0	6	6
	Auto 114 242	1	0+3					
		13	21		13	15	26	36
Gage	Auto 115 211/212	4	3+3	Auto115 211/212	4	3+3	8	12
	Auto 115 212	1	0+3	Auto115 212	1	0+3	2	6
	Auto 201 211	4	3+3	Auto 114 222	1	0+3	5	9
	Auto 114 211/212	3	3+0	Auto 202 211	4	3+3	4	6
		12	18		10	18	22	36

8/6/02

TECH OF THE FUTURE DAYS
SCHEDULE

Date	Arrival Time	School/Instructor	Address/Phone	# Of students	AS	HES	Campus Tour	Lunch	# Busses Arriving
2-Oct	9:30 AM	Gladwin High School-David Sleeper *Mach Tool and HVAC*	1400 North Spring Street Gladwin 48624 Phone: 989-426-7341 Fax: 989-426-6031	20	X	X	X-1:00	X	1
3-Oct	9:30 AM	Central Lake School-Dennis Aenis		6	10:45	9:45 10:45		X	
9-Oct	10:00 AM	Newaygo Career Tech Center John Link	4645 West 48TH Street Freemont 49412	120	1st	2nd		HEQ	2
	10:00 AM	Branch Area Career Center-Rick Furney	366 Morse Street Coldwater 49036	13	1st	2nd		HEQ	
	10:00 AM	Cadillac Wexford-Missaukee ISD-Matt McNulty	9901 East 13th Street Cadillac 49601 231-876-2241	132	2nd	1st		X	3
	10:30 AM	Calhoun Area Vocational Center-Lee Weaver	475 East Roosevelt Battle Creek 49017	55	12:00	10:30		HEQ	1
	8:45 am	Heartland Inst of Technology-Dave Armentrout	250 E Tuttle Road Ionia 48846 616-527-0542	70	1st	2nd		HEQ	2
	9:30 am	Montcalm Area Career Center-Phil Allen	1550 West Sidney Road Sidney 48885 517-328-6621	22	1st	2nd		HEQ	1
16-Oct	10:00 AM	Traverse City Career Tech Center-Jim Wrede	880 Parson Road Traverse City 49686	125	X	X	X	X	2
17-Oct	9:30/2:00	Coleman Community HS-Manuel Hagon	PO Box W Coleman 48618 989-465-9851 (HVAC Also)	30	X	X	X	X	1
23-Oct	10:00 AM	Bay Arenac Career Center-Richard Neidzwiecki	4155 Monitor Road Bay City MI 48906 Fax: 989-667-3282 Phone: 989-686-4770	163	X	X		X	3
	9:05 AM	Mecosta Osceola Career Center-Ron Kanitz	15830 190th Avenue BR	22	2nd	1st		X	1
	12:15 PM	Mecosta Osceola Career Center-Ron Kanitz	15830 190th Avenue BR	22	1st	2nd		1st-X	1
		Lapeer High School (Flint)	About 10 students per every other week	10					
30-Oct	9:30 am	St. Johns High School- Larry Button	501 West Sickles Street St Johns 48879	45	2nd	1st	X	X	1
	9:30 am	New Hall Middle School-Jan Kail	1840 38th Street SW Wyoming 49509 616-530-7590	25	1st	2nd		X	1
	9:30 am	Careerline Tech Center-Doug Ide	13663 Port Sheldon Holland 49424 616-738-8950	42	2nd	1st		X	1
	9:30 am	Southern Lake Career Center-Greg Warner	2100 W Thomson Rd Fenton 48430	4	1st	2nd		X	
	10:30 AM	Huron Area Tech Center- Tony Syrankis	1160 South Van Dyke Bad Axe 48413	6	X			X	
	10:30 AM	Genesee-GASC Technology Center		80				X	

	10:30 AM	St. Claire Shores	499 Range Rd. Port Huron 48061 810-364-8990 X326	50	1st	2nd		X	1
6-Nov	10:30 AM	Tuscola Technology Center-Larry Hoelde	1401 Cleaver Road Caro 48723 989-673-5300 X470	50	X	X		X	1
	10:30 AM	Pankow Vocational Tech Center-Rich Stumpf	24600 F.V. Pankow Blvd Clinton Township 48036 810-783-6570 ext. 1402----Auto Body Only	65	X		X	X	2
	9:00 AM	Mecosta Osceola Career Center-Ken Barnard	15830 190th Avenue BR	22	X	X		X	1
	12:30 PM	Mecosta Osceola Career Center-Ken Barnard	15830 190th Avenue BR	20	X	X		X	1
12-Nov	10:00 AM	Cheboygan High School	810 W. Lincoln Cheboygan 49721	50	X	X		X	
	9:00 AM	East Jordan High School-Dan Brennan	PO Box 399 East Jordan 49727	16	2nd	1st		X	1
13-Nov	8:30/1:00	Kent Skills Career Tech Center-Richard Goldner	1655 East Beltline, NE Grand Rapids 49505 616-364-8421 (*Space*	300	2nd	1st		X	4
	10:30 AM	Huron Area Tech Center - Tony Syrankis	1160 South Van Dyke-Bad Axe 48413	6	X			X	
27-Nov	9:30 AM	Traverse City Career Tech Center- Dan Bowers	880 Parson Road Traverse City 49686 AUTO BODY---ONLY	45	X				1
4-Dec	10:30 AM	Davidson High School- George Johnston	1250 North Oak Rd. Davidson 48423 810-591-3531 ext. 248	25	X	X		X	1

Lapeer High School is bring 10 students every other week

Tech-Update Seminar
Ferris State University Automotive Center
Wednesday, May 8, 2002
Attendance Sheet - Ford 4R70W Automatic Transmissions
Presenter: Ronald Tuuri
Room: AC 121
Time: 8:30 am - 11:30 am

	Role Call	CEURF	Date Mailed	Non-CEURF	Date Mailed	First Name	Last Name	School	Phone
1	Y			YES	5/16/02	Dennis	Ackerson	Lakewood High School	616-374-8868 ext. 2294
2	Y			YES	5/16/02	Phillips	Allen	Montcalm Area Career Center	989-328-6621
3	N					Marvin	Argersinger	Lansing Community College	517-483-1375
4	N					Eric	Erskin	Sault Area Vocational Center	906-635-3839
5	Y	YES	5/16/02			Bill	Morlock	Capital Area Career Center	517-244-1369
6	Y			YES	5/16/02	Douglas	Powers	Newaygo Co Career Tech Center	231-924-8842
7	Y	YES	5/16/02			Jon	Sutton	TBA Career Tech Center	231-922-7869
8	Y			YES	5/16/02	Robert	Thielen	Western High School	877-702-8601 ext. 4455
9	Y			YES	5/16/02	Dan	Ward	Newaygo Co Career-Tech Center	231-924-8833
10	Y	YES	5/16/02			Scott	Westenberg	Capital Area Career Center	517-244-1369
11	N					Jim	Wrede	TBA Career Tech Center	231-922-7869
12	Y	YES	5/16/02			Joe	Price	St Clair County ISD	
13	Y	YES	5/16/02			Brain	Partika	Huron Technology Center	989-269-9284
14		YES	5/16/02			Randy Richard	S nski	Wexford-Missauke	231-876-2240
15		YES	5/16/02			Rodney Eric	F s	Heartland Ins of Technology	616-527-2128
16		YES	5/16/02			Mark	H	Alpena Public Schools	989-358-5235
17		YES	5/16/02			Edward D.	C necki	Alpena Public Schools	989-358-5263
18		YES	5/16/02			John	Kir gsley	School District of Ypsilanti	

Tech-Update Seminar
Ferris State University Automotive Center
Wednesday, May 8, 2002
Attendance Sheet- John Bean 3D Visualiner
Presenter: Chris Weston
Room: AC 118
Time: 8:30 am - 12:00 pm

	Role Call	CEURF	Date Mailed	Non-CEURF	Date Mailed	First Name	Last Name	School	Phone
1	Y			YES	5/16/02	Gordon	Crandell		
2	Y			YES	5/16/02	Donald	Bero		
3	Y			YES	5/16/02	David	Ar entrout	Heartland Inst of Technology	616-527-0542
4	N					Marvin	A singer	Lansing Community College	
5	N					Edward	C necki	Armada Area High School	989-358-5235
6	Y			YES	5/16/02	Denny	A erson	Lakewood High School	
7	N					Matthew	McNulty	Wexford-Missaukee ISD Center	231-876-2241
8	N					Randall	Piatti	North Central Area High School	906-497-5226
9	Y			YES	5/16/02	Mack	Gaut	Genesse Area Tech Center	810-760-1444 ext. 118
10	N					Douglas	Powers	Newaygo Co Career Tech Center	231-924-8842
11	Y	YES	5/16/02			Jon	Sutton	TBA Career Tech Center	231-922-7869
12	N					Robert	Thielen	Western High School	877-702-8601 ext. 4455
13	Y	YES	5/16/02			Dan	Ward	Newaygo Co Career-Tech Center	231-924-8833
14	N					Jim	Wrede	TBA Career Tech Center	231-922-7869
15	Y	YES	5/16/02			Joe	Price	St Clair County ISD	
16	Y	YES	5/16/02			Randy Richard	Stoinski	Wexford-Missauke	
17	Y	YES	5/16/02			Rodney Eric	Ruehs	Heartland Ins of Technology	616-527-2128
18	Y	YES	5/16/02			Mark	Hay	Alpena Public Schools	989-358-5235
19	Y	YES	5/16/02			Edward D.	Crarnecki	Alpena Public Schools	989-358-5263
20	Y	YES	5/16/02			John	Kingsley	School District of Ypsilanti	

Tech-Update Seminar
Ferris State Univ[illegible]ity Automotive Center
Wednes[illegible]May 8, 2002
Attendance Sheet [illegible]rd New Training Model
Presente[illegible]ark Dekoster
Roo[illegible]: AC 118F
Time: 1:00 pm - 4:00 pm

	Role Call	CEURF	Date Mailed	Non-CEURF	Date Mailed	First Name	Last Name	School	Phone
1	Y			YES	5/16/02	Phillips	Allen	Montcalm Area Career Center	989-328-6621
2	Y			YES	5/16/02	David	Armentrout	Heartland Inst of Technology	616-527-0542
3	N					Marvin	Argersinger	Lansing Community College	517-483-1375
4	Y			YES	5/16/02	Donald	Bero	Genesse Area Tech Center	
5	Y			YES	5/16/02	Eric	Erskin	Sault Area Vocational Center	906-635-3839
6	N					Matthew	McNulty	Wexford-Missaukee ISD Center	231-876-2241
7	Y	YES	5/16/02			Dan	Ward	Newaygo Co Career-Tech Center	231-924-8833
8	Y			YES	5/16/02	Denny	Ackerson	Lakewood High School	
9	Y			YES	5/16/02	Mack	Gaut	Genesse Area Tech Center	810-760-1444 ext. 118
10	Y	YES	5/16/02			Jon	Sutton	TBA Career Tech Center	231-922-7869
11	Y			YES	5/16/02	Robert	Thielen	Western High School	877-702-8601 ext. 4455
12	N					Jim	Wrede	Career Tech Center	231-922-7869
13	Y	YES	5/16/02			Joe	Price	St Clair County ISD	
14									
15	N	YES	5/16/02			Randy Richard	Stoinski	Wexford-Missauke	
16	N	YES	5/16/02			Rodney Eric	Ruehs	Heartland Ins of Technology	616-527-2128
17	N	YES	5/16/02			Mark	Hay	Alpena Public Schools	989-358-5235
18	N	YES	5/16/02			Edward D.	Crarnecki	Alpena Public Schools	989-358-5263
19	Y	YES	5/16/02			John	Kingsley	School District of Ypsilanti	

Tech-Update Seminar
Ferris State University Automotive Center
Wednesday, May 8, 2002
Attendance Sheet - Snap-On Overview of New Equipment
Presenter: Steve Balderson/Brain Metzer
Room: AC 118
Time: 1:00 pm - 4:00pm

	Role Call	CEURF	Date Mailed	Non-CEURF	Date Mailed	First Name	Last Name	School	Phone
1	Y			YES	5/16/02	Dennis	Ackerson	Lakewood High School	616-374-8868 ext. 2294
2	N					Marvin	Argersinger	Lansing Community College	517-483-1375
3	Y			YES	5/16/02	Edward	Czarnecki	Armada Area High School	989-358-5235
4	Y			YES	5/16/02	Mark	Hay	Alpena High School	989-358-5235
5	Y	YES	5/16/02			Bill	Morlock	Capital Area Career Center	517-244-1369
6	N					Randall	Piatti	North Central Area High School	906-497-5226
7	Y			YES	5/16/02	Douglas	Powers	Newaygo Co Career Tech Center	231-924-8842
8	Y	YES	5/16/02			Rodney	Ruehs	Heartland Inst of Technology	616-527-0542
9	Y	YES	5/16/02			Randy	Stoinski	Wexford-Missauke	231-876-2240
10	Y	YES	5/16/02			Jon	Sutton	TBA Career Tech Center	231-922-7869
11	Y			YES	5/16/02	Robert	Thielen	Western High School	877-702-8601 ext. 4455
12	Y			YES	5/16/02	Dan	Ward	Newaygo Co Career-Tech Center	231-924-8833
13	N	YES	5/16/02			Scott	Westenberg	Capital Area Career Center	517-244-1369
14	N					Jim	Wrede	TBA Career Tech Center	231-922-7869
15	N	YES	5/16/02			Joe	Price	St Clair County ISD	
16	Y	YES	5/16/02			Brain	Partika	Huron Technology Center	989-269-9284
17	N	YES	5/16/02			Mark	Hay	Alpena Public Schools	989-358-5235
18	N	YES	5/16/02			Edward D.	Crarnecki	Alpena Public Schools	989-358-5263
19	N	YES	5/16/02			John	Kingsley	School District of Ypsilanti	

SECTION 11

PROGRAM PRODUCTIVITY COSTS

The Automotive Program (course designator has increased from 298 in 1996 to 321 in 2001) this can be seen in the productivity book and the administrative review. For the last two years, we have moved a faculty from the Automotive Body program to teach in the Automotive Service program. Even with adding another faculty to the Automotive Service program, we were still able to increase our productivity. This has been done because of the gross increases in student numbers in past few years. As a result of moving the auto body faculty to the auto service program, we also changed the productivity of auto body from 222 to 360.

With the adding of the Automotive Engineering Technology program, we will generate more student credit hours in the auto designator. This is because the courses in the AET program use the auto designator and the auto faculty group is responsible for teaching the auto designator.

With both the Auto and AET programs increasing enrollment steadily over the next couple of years the productivity of the auto designator will continue to increase.

From the fall of 1996 to fall of 2002 Auto Service along with AET will have increased its enrollment from 129 to 230 that is an increase of 100 students in six years. That is almost double the amount of students that the Auto Service S&E (Supplies & Expenses) budget has to supply for. The Auto Service S&E budget has been around $33,000 for the last number of years. As can be seen by the monthly S&E spreadsheets we spend almost our entire S&E, which only includes some lab supplies, intern travel, copies, and phone services. With increasing enrollment obviously comes an increase to

the number of copies, phone calls for recruiting and registration purposes along with travel for student internships. With the supplier cost to us going up every year, do to inflation and my S&E budget remaining constant there will be problems sooner or later. Sense the auto department has been growing at one of the fastest rate of any department in the College of Technology and is the only department over 300 students in the College of Technology. The auto department will be the first department that has its S&E budget go into the red. There are departments/programs in the College of Technology that have lost enrollment of 100 students in the last 10 years and yet still have the same S&E, .faculty resources, and equipment monies. With some departments increasing their enrollment by 100 while other departments are decreasing by 100 this causes over a 200-student shift between departments. Sense majority of the departments in the College of Technology only average around 100 to a 125 students a 200-student shift is totally unacceptable in reference to resource allocations of S&E, [illegible], and faculty. We are always told that the budgeting will be done with the major consideration being history. As can be seen with the 200-student shift history should be the least consideration. This seems to be a resource allocation problem at the college level not at the university level. This seems to be caused by not having a consistent leader (dean) over the past ten years at the college level. It would have been unfair to expect any of the temporary, acting, or interim deans to make those types of decisions. However, after ten years something has to be done with both budget and other resource reallocation.

Auto Service Overloads

2000-2001	1.47	Actual
2001-2002	2.14	Projected
2001-2002	2.16	Actual
2002-2003	2.5	Projected

2002

Gary Gage: One year temp last 4-5 years.

Overload: Were lower in 2002 because of moving Vic Fowler to cover auto service classes

Mike Hachman: 3 Credits Over

Bill Wagner: 2 Credits Over

Ron Tuuri: 3 Credits Over

	Faculty/Staff	**Faculty/Load**	**Overload**	
	Gary Gage	17/45	19/39	
Auto Body Faculty	Vic Fowler	18/30	18/30	Overload not paid... internal transfer. but will need to be paid next year because of Gary Edgerly retirement.
	Mike Hachman	15/39	3/0	
	Bill Wagner	26/36	0/6	
	Ron Tuuri	23/39	0/3	
			40/78 = 2.16 Overloads	

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.

Based on the enrollment trends for the past six years for Auto Body and Auto Service my suggestion would be to run the Auto Body program with two faculty instead of three and transfer Gary Edgerly's position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the program will still have the highest overloads in the College of Technology.

Program	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

Will need to replace all three positions:

Faculty Name	**Position**	**Date Retiring**
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

AUTO SERVICE

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	0.00	413.32	63.60	78.34	33[illegible].07	0.00	100.68	0.00	211.81	155.88	0.00	0.00	1,360.70
Lab Supplies/Parts C	0.00	0.00	298.84	246.62	5[illegible]03	0.00	523.04	458.17	280.40	750.10	770.31		3,906.31
Travel	0.00	942.80	217.00	39.68	[illegible]3	1,156.45	1,275.09	339.39	1,154.52	1,172.04	947.49	1,020.24	8,644.58
Fuel/Credit Cards	0.00	324.80	28.23	13.20	[illegible]0	12.04	145.82	172.00	33.47	23.04	24.26		776.86
Fuel/Motor Pool	201.06	108.92	68.69	108.68	[illegible]7	79.11	159.03	28.08	117.99	262.31	64.10		1,275.74
Copy Center	53.18	29.75	53.15	61.64	404.10	0.00	169.00	337.90	64.15	99.75	11.55		1,284.17
Copy Machine	0.00	520.50	413.85	656.35	751.60	871.40	246.05	874.65	855.60	903.00	396.30	85.70	6,575.00
Telephone Eq	302.47	302.47	302.47	310.84	307.09	307.09	307.09	307.09	307.09	307.09	307.09		3,367.88
Long Distance	350.78	239.19	446.14	348.89	372.84	252.88	426.74	347.29	308.54	305.15	64.10		3,462.54
TOTAL	907.49	2,881.75	1,891.97	1,864.24	3,209.18	2,678.97	3,352.54	2,864.57	3,333.57	3,978.36	2,585.20	1,105.94	30,653.78

AHM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	0.00	247.46	169.15	89.64	126.88	65.34	0.00	0.00	15.96	104.62	0.00	0.00	819.05
Lab Supplies/Parts C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	0.00		4.14
Travel	0.00	1,947.52	0.00	0.00	10.00	0.00	0.00	3,480.84	29.15	0.00	0.00		5,467.51
Fuel/Credit Cards	0.00	49.52	0.00	0.00	0.00	21.98	0.00	0.00	89.10	34.87	0.00		195.47
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.35	0.00	0.00		33.35
Copy Center		56.00	226.40	13.00	44.80	0.00	13.00	13.00	9.00	96.76	0.00		471.96
Copy Machine		143.35	55.10	161.45	184.1	270.30	118.30	360.70	166.60	271.35	93.55	51.70	1,876.50
Telephone Eq	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78		1,636.58
Long Distance	98.05	42.46	141.16	29.71	100.94	92.17	105.63	10 7.20	74.23	109.52	117.26		911.13
TOTAL	246.83	2,635.09	740.59	442.58	615.50	598.57	385.71	4,003.32	566.17	770.04	359.59	51.70	11,415.69

AUTO BODY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	32.97	248.3	47.18	0.00	69.27	6.12	132.7	153.58	39.6	53.04	0.00	0.00	782.76
Lab Supplies/Parts C	0.00	0.00	1,056.54	0.00	296.37	0.00	320.86	0.00	1,727.98	356.37	1,203.61		4,961.73
Travel	0.00	0.00	37.20	31.00	0.00	497.00	41.60	0.00	39.68	0.00	0.00		646.48
Fuel/Credit Cards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Copy Center	0.00	0.00	0.00	0.00	0.00	0.00	39.00	82.60	0.00	25.29	0.00		146.89
Copy Machine	0.00	73.90	25.35	107.70	49.40	126.20	74.50	175.10	71.60	102.55	2.20	1.45	809.95
Telephone Eq	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13		210.43
Long Distance	13.42	2.67	9.43	12.75	2.70	8.44	1.63	1.07	0.86	9.11	9.62		71.70
TOTAL	65.52	344.00	1,194.83	170.58	436.87	656.89	629.42	431.48	1,898.85	565.49	1,234.56	1.45	7,629.94

TOTAL $49,699.41

FERRIS STATE UNIVERSITY - COLLEGE OF TECHNOLOGY

Student Credit Hours (SCH), Full Time Equated Faculty (FTEF) and SCH/FTEF

Course Prefixes	Year	Student Credit Hours				Full Time Equated Faculty				SCH/FTEF			
		Summer	Fall	Winter	F + W (a)	Summer	Fall	Winter	Avg F + W (b)	Summer	Fall	Winter	F + W (a/b)
MATL	2000-01	4	315	234	549		1.00	0.86	0.93		315.00	272.09	590.32
ETEC	2000-01		450	204	654		1.71	0.68	1.20		263.82	300.63	547.28
PDET	2000-01		261	402	663		0.82	1.61	1.22		318.88	250.37	545.68
CONM	2000-01		2264	1768	4032		8.04	7.72	7.88		281.67	202.90	511.68
PHOT	2000-01	51	132	186	318	0.25	0.55	0.75	0.65	204	242.00	248.00	489.23
BCTM	2000-01		198	234	432		0.83	1.11	0.97		237.60	210.00	445.36
MFGE	2000-01	158	1169	1171	2340	1.17	4.47	6.39	5.43	135	261.25	183.26	430.94
MECH	2000-01	40	684	588	1272	0.13	3.15	3.38	3.27	308	217.43	174.18	389.59
ARCH	2000-01		966	916	1882		5.23	4.50	4.87		184.80	203.56	386.84
AHEM	2000-01	230	504	642	1146	1.26	2.84	3.17	3.01	183	177.67	202.52	381.36
PLTS	2000-01	340	1176	1501	2677	2.21	7.00	7.67	7.34	154	168.00	195.78	364.96
WELD	2000-01	88	1104	800	1904	0.67	5.00	5.55	5.28	131	220.80	144.14	360.95
ABOD	2000-01		360	410	770		2.00	2.28	2.14		180.00	179.82	359.81
EEET	2000-01	107	1453	1351	2804	0.81	7.73	8.88	8.31	132	187.92	152.20	337.63
HVAC	2000-01	116	1400	1168	2568	0.67	8.00	7.70	7.85	173	175.00	151.69	327.13
AUTO	2000-01	378	2177	1862	4039	4.02	12.83	12.33	12.58	94	169.64	151.01	321.07
HEQT	2000-01	168	858	842	1700	1.45	6.10	5.66	5.88	116	140.64	148.85	289.12
SURE	2000-01	237	672	861	1533	1.10	4.55	6.10	5.33	215	147.84	141.09	287.89
HSET	2000-01	44	156	156	312	0.21	0.90	1.33	1.12	210	173.46	117.00	279.82
CDTD	2000-01		599	527	1126		3.50	4.56	4.03		171.14	115.57	279.40
NMPP	2000-01		39	39	78		0.33	0.25	0.29		117.00	156.00	268.97
MFGT	2000-01		846	636	1482		5.46	5.61	5.54		155.08	113.37	267.75
ECNS	2000-01		286	114	400		1.27	1.73	1.50		225.57	65.77	266.67
FMAN	2000-01	82	349	293	642	0.58	2.27	2.67	2.47	140	153.56	109.74	259.92
RUBR	2000-01	68	288	226	514	0.67	2.00	2.08	2.04	101	144.00	108.48	251.96
PTEC	2000-01		821	648	1469		6.12	6.00	6.06		134.12	108.00	242.41
CETM	2000-01		33	117	150		0.33	1.30	0.82		99.00	90.00	184.05
PMGT	2000-01	78	163	178	341	0.67	2.00	2.00	2.00	116	81.50	89.00	170.50
HEQK	2000-01			4	4			0.00	0.00				
Total			19723	18078	37801		106.03	113.87	109.95		5344.39	4585.02	9838.28
Average													343.80
Standard Deviation													110.35

Copy Machine Report 2000/2001

		Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June
Auto Service - 239175												
3224	P. Alley	244	144	1644	229	690	5	424	532	657	420	261
0399	R. Billings	740	2216	1530	3093	2460	622	2014	1286	2965	1790	43
9805	C. Bonning	221	197	174	195	371	453	653	11	537	108	61
0052	M. Hachman	159	931	1165	1069	540	201	239	4	9	0	0
3303	G. Key	470	167	441	453	798	32	2473	757	849	166	38
9624	R. Nelderhelde	567	308	500	577	468	484	555	357	449	123	0
9851	J. Norrington	499	1072	862	628	863	6	1345	1072	937	456	79
7935	B. Upham	2430	928	1318	1447	2073	462	1678	1080	692	2259	19
9283	B. Routley	715	306	626	648	2191	110	2139	2347	1652	397	13
4521	D. Skurski	691	321	675	636	3631	1642	1937	1312	2492	210	66
2263	R. Tuuri	243	304	310	719	119	0	0	0	0	1	196
4366	B. Wagner	796	497	1631	1917	1219	503	1027	917	895	386	5
3387	A. Kunnen	2482	509	1129	968	218	114	685	636	590	652	276
2375	Student Org.	152	369	365	295	1	0	15	104	150	0	0
8976	J. Peticolas	1	8	28	24	95	126	41	38	66	23	134
1863	K. Myers			729	2134	1595	161	1632	6060	3133	696	0
3361	G. Gage	0	0	0	0	96	0	436	599	1987	239	523
PROGRAM TOTAL COPIES		10410	8277	13127	15032	17428	4921	17493	17112	18060	7926	1714
		$520.50	$413.85	$656.35	$751.60	$871.40	$246.05	$874.65	$855.60	$903.00	$396.30	$85.70
Auto Body - 2-39155												
9715	J. Bigelow	50	177	519	661	416	438	144	37	99	0	0
8038	G. Edgerly	318	125	909	224	761	89	253	51	194	0	0
7914	V. Fowler	84	79	571	99	1299	947	2597	1336	1740	43	0
9275	D. Tice	1026	126	1	4	48	16	508	2	18	1	29
PROGRAM TOTAL COPIES		1478	507	2	988	2524	1490	3502	1426	2051	44	29
		$73.90	$25.35	$10	$49.40	$126.20	$74.50	$175.10	$71.60	$102.55	$2.20	$1.45
AHM - 2-39160												
6171	M. Ropele	27	13	2	2	459	384	2225	1205	1556	827	158
6214	G. Denny	1501	495	804	950	2335	1166	3325	624	2066	584	216
0455	D. Vander Woude	728	293	1012	1233	863	630	1156	973	1443	376	600
2361	AHMSO	0	15	5	0	0	0	0	247	24	0	0
2360	T. Brownell	4	8	75	0	172	179	443	253	310	3	46
2847	J. Gahrs	607	278	1124	1497	1577	7	65	30	28	81	14
PROGRAM TOTAL	TOTAL COPIES	2867	1102	3229	3682	7885	2366	7214	3332	5427	1871	1034
		$143.35	$55.10	$161.45	$184.10	$270.30	$118.30	$360.70	$166.60	$271.35	$93.55	$51.70
DEPT. TOTAL COP	total copies	14755	9886	18,510	19,702	25,358	8,777	28,209	21,870	25,538	9841	2777
Copy Machine reading		14,755	24,641	43,151	62,853	88,211	96,988	125,197	147,067	172,605	182,446	185,223

	Copy Machine Reports			2001/2002									
		July	Aug.	Sept.	Oct.	Nov.	Dec.	Dec/Jan	Feb	March	April	May	June
Auto Service - 239175													
3224	P. Alley	211	464	511	473	404		799	435	785	1148	1019	134
0399	R. Billings	0	396	1390	1113	557		1654	1976	898	880	305	5
9805	C. Bonning	372	519	976	1534	173		129	30	228	702	485	10
0052	M. Hachman	0	90	40	559	372		151	529	6	93	9	0
3303	G. Key	69	815	1445	1873	558		989	873	0	2470	218	224
6164	R. Leonard	1	384	454	427	130		477	0	798	0	0	0
9851	J. Norrington	4	2094	1676	863	766		709	676	1515	574	385	15
7935	B. Upham	207	264	1106	837	851		931	535	414	371	802	0
9283	B. Routley	9	486	419	2288	635		1246	257	810	77	310	12
4521	D. Skurski	181	370	595	2071	1117		5401	3020	1024	2610	175	35
2263	R. Tuuri	19	289	163	436	71		23	256	223	143	561	0
4366	B. Wagner	0	772	1343	1921	1078		1003	806	464	721	309	1
3387	A. Kunnen	469	993	455	621	824		531	528	477	782	655	113
2375	Student Org.	0	0	96	20	10		2375	11	4	0	0	0
8976	J. Peticolas	97	10	68	70	28		81	118	237	17	134	70
1863	K. Myers	0	2003	781	3033	2463		4627	2804	632	3216	2750	694
3361	G. Gage	73	16	343	223	197		1575	1812	1223	1589	863	13
PROGRAM TOTAL COPIES		1712	9965	11855	18362	10234		22701	14666	9738	15393	8980	1326
		$85.60	$498.25	$592.75	$918.10	$511.70		$1,135.05	$733.30	$486.90	$769.65	$449.00	$66.30
Auto Body - 2-39155													
9715	J. Bigelow	0	691	277	315	0		452	105	702	184	5	0
8038	G. Edgerly	0	217	20	496	92		100	388	156	110	0	0
7914	V. Fowler	100	743	1147	1222	1001		431	910	1845	745	172	0
9275	D. Tice	1692	147	78	133	30		329	107	107	10	342	8
PROGRAM TOTAL COPIES		1772	1798	1522	2166	1123		1312	1510	2810	1049	519	8
		$88.60	$89.90	$76.10	$108.30	$56.15		$65.60	$75.50	$140.50	$52.45	$25.95	$0.40
AHM - 2-39160													
6171	M. Ropele	1175	908	2040	13357	908		1205	661	1494	2932	765	76
6214	G. Denny	20	719	977	1051	1481		355	483	2276	682	700	356
0455	D. Vander Woude	7	454	480	1068	521		1638	2196	2730	319	229	423
2361	AHMSO	0	0	56	128	294		704	1622	866	2492	530	20
2360	T. Brownell	1	9	18	0	3		68	0	0	5	10	0
2847	J. Gahrs	288	29	9	157	20		146	1	6	4	222	2
PROGRAM TOTAL	TOTAL COPIES	1491	2119	3580	15761	3227		4116	4963	7372	6434	2456	877
		$74.55	$105.95	$179.00	$288.05	$161.35		$205.80	$248.15	$368.60	$321.70	$122.80	$43.85
Lang. & Lit									50	12	251	0	
2520	2-36250								2.50	0.60	12.55	0	
2520													
5990/ropes course	2-35150												
DEPT. TOTAL COP	total copies	4995	13,882	16957	26,289	14,584		30,373	21,169	19,932	23,127	11,955	2211
Copy Machine reading		190,218	204,106	221,063	247,352	261,936		290,065	311,234	331,166	354,293	366,248	368,459

AUTO SERVICE 2001/2002

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	522.17	0.00	237.34	55.26	46.97	0.00	47.09	0.00	0.00	86.50	0.00	7.00	1,002.33
Lab Supplies/Parts Crib	0.00	0.00	738.74	586.2	496.35	0.00	49.96	146.69	122.93	228.96	0.00	0.00	2,369.89
Travel	1,624.02	1,314.12	972.99	275.	2,192.25	586.90	362.43	801.39	296.43	546.32	596.50	816.28	10,385.13
Fuel/Credit Cards	64.32	149.80	30.68	36	0.00	14.30	75.34	88.94	31.54	86.72	35.05	0.00	612.91
Fuel/Motor Pool	66.93	40.07	54.13	80.	41.06	20.13	97.45	44.09	13.36	101.17	43.47	37.87	640.06
Copy Center	223.31	115.85	14.46	235.	26.00	9.34	26.84	5.04	6.50	85.70	50.62	0.00	799.47
Copy Machine	0.00	583.85	592.75	0.0	1,429.80	0.00	1,135.05	732.30	486.90	769.65	449.00	66.30	6,245.60
Telephone Eq	307.09	307.09	307.09	307.09	307.09	307.09	307.09	307.09	307.09	318.48	307.09	307.09	3,696.47
Long Distance	267.19	408.76	242.76	474.33	336.36	299.55	342.29	636.40	641.69	981.47	499.52	331.34	5,461.66
Calling Card	48.58	11.06	16.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.02	80.62
TOTAL	3,123.61	2,930.60	3,207.90	2,050.80	4,875.88	1,237.31	2,443.54	2,761.94	1,906.44	3,204.97	1,981.25	1,569.90	31,294.14

AHM 2001/2002

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	315.44	0.00	0.00	0.00	216.40	0.00	0.00	176.04	0.00	141.23	0.00	0.00	849.11
Lab Supplies/Parts Crib0	0.00	0.00	0.00	42.26	97.50	0.00	0.00	333.89	0.00	0.00	0.00	0.00	473.65
Travel	1,445.98	1,353.83	1,809.86	34.34	0.00	0.00	0.00	0.00	0.00	745.95	431.46	0.00	5,821.42
Fuel/Credit Cards	0.00	33.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	46.55	0.00	80.30
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copy Center	0.00	0.00	121.30	37.25	74.00	0.00	135.20	0.00	0.00	130.24	6.50	0.00	504.49
Copy Machine	0.00	180.50	179.00	0.00	449.4	0.00	205.80	248.15	368.00	34.70	122.80	43.85	1,832.20
Telephone Eq	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	1,785.36
Long Distance	66.52	77.50	105.34	38.10	29.57	197.63	78.78	52.44	84.70	182.88	151.32	86.60	1,151.38
Calling Card	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	1,976.72	1,794.36	2,364.28	300.73	1,015.65	346.41	568.56	959.30	601.48	1,383.78	907.41	279.23	12,497.91

AUTO BODY 2001/2002

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	141.90	120.09	0.00	159.37	136.84	0.00	0.00	0.00	149.62	21.80	0.00	0.00	729.62
Lab Supplies/Parts Crib	0.00	0.00	0.00	13.44	238.86	283.12	0.00	883.40	840.00	249.79	800.43	0.00	3,309.04
Travel	76.00	0.00	0.00	250.00	1,066.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,392.98
Fuel/Credit Cards	0.00	0.00	0.00	0.00	2.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.79
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Copy Center	13.00	0.00	0.00	6.50	26.00	0.00	43.00	0.00	0.00	0.00	0.00	0.00	88.50
Copy Machine	0.00	179.50	76.10	0.00	164.45	0.00	65.60	75.50	140.50	52.45	25.95	0.40	780.45
Telephone Eq	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19 13	19.13	19.13	19.13	229.56
Long Distance	0.98	1.15	1.57	6.03	6.74	2.16	1.75	5.40	3.52	9.19	5.58	0.72	44.79
Calling Card	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	251.01	319.87	96.80	454.47	1,661.79	304.41	129.48	983.43	1,152.77	352.36	851.09	20.25	6,577.73

ADMINISTRATIVE PROGRAM REVIEW: 2001

(final version – 10/24)

Program/Department: Automotive Service Date Submitted: 11.01

Please provide the following information:

Enrollment

	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Fall 2001
Tenure Track FTE	11.61	12.23	12.9	12.6	12.58
Overload/Supplemental FTEF					
Adjunct/Clinical FTEF (unpaid)					
Enrollment on-campus total*	179	181	169	183	158
Freshman	73	79	91		74
Sophomore	59	67	59		63
Junior	16	17	10		18
Senior	3	4	2		3
Masters	15				
Doctoral					
Pre-Professional Students	13	14	7		
Enrollment off-campus*					
Traverse City					
Grand Rapids					
Southwest					
Southeast					

*Use official count (7-day)

If there has been a change in enrollment, explain why: Has climbed to an average of 170 for 5 years.

Capacity:

Estimate program capacity considering current number of faculty, laboratory capacity, current equipment, and current levels of S&E.

160-180 Students

What factors limit program capacity? Faculty: presently have 2 FTEF over loads.

Financial

Expenditures*	FY 97	FY 98	FY 99	FY 00	FY 01
Supply & Expense					
Faculty Prof. Development					
General Fund	1,500	2,000	1,500	2,002	1,183
Non-General Fund					
UCEL Incentives					
FSU-GR Incentives					
Equipment					
Voc. Ed. Funds	36,075	43,750	32,555	32,450	40,061
General Fund	3,232	3,500	6,010	-0-	0
Non-General Fund	-0-	16,000	2,731	9,874	-0-
UCEL Incentives					
FSU-GR Incentives					

*Use end of fiscal year expenditures.

If you spent UCEL and FSU-GR incentive money for initiatives/items other than faculty professional development and equipment, what were they? Explain briefly. Please also include amounts spent on each initiative/item.

Revenues	FY 97	FY 98	FY 99	FY 00	FY 01
Net Clinic Revenue					
Scholarship Donations	1,000	1,000	1,000	0	0
Gifts, Grants, & Cash Donations				10,000	15,062
Endowment Earnings					
Institute Programs/Services					
In-Kind	500,271	152,571	82,342	176,792	202,024

Other

	AY 96/97	AY 97/98	AY 98/99	AY 99 00	AY 00/01
Number of Graduates* - Total				51	49
- On campus		53	59	51	49
- Off campus					
Placement of Graduates		99	98	99%	95.5%
Average Starting Salary					
Productivity - Academic Year Average	298.59	313.79	300.95	307.70	321.07
- Summer					
Summer Enrollment					

* Use total for full year (S, F. W)

1. a) Areas of Strength:

Productivity has increased because of certificate programs. AS AET Degree attracts new freshman productivity will continue to increase.

b) Areas of Concern and Proposed Action to Address Them:

Increase enrollment may cause faculty load problems. Presently Auto Service has 2 FTEF of over load and one of these over loads is presently being taught by one of the Auto Body teacher.

2. Future goals (please give time frame)

Will have to shift one faculty from Auto Body to Auto Service.

3. Other Recommendations:

4. Does the program have an advisory committee? YES

a) **If yes, when did it last meet?** October 25, 2001 Ford (ASSET), March 29, 2001 General Motors (ASEP), February 21, 2001 Chrysler (CAP), April 4, 2001 Comprehensive

b) **If no, why not? By what other means do faculty receive advice from employers and outside professionals?**

c) **When were new members last appointed?**

d) **Are there non-alumni/ae on the committee? How many?** Most members are not Alumni.

5. Does the program have an internship or other cooperative or experiential learning course?

a) **If yes, is the internship required or recommended?** Internship is used for a replacement for second service floor in comprehensive program.

b) **If no, what is the reason for not requiring such an experience?**

Co-op is dor[illegible] winter and summer

6. Does the program offer courses through the web? NO

a) Please list the web-based (fully delivered through the Internet) courses the program offered last year?

NONE

b) Please list the web-assisted (e.g., WebCT) courses the program offered last year.

AUTO 111 & 211

7. What is unique about this program?

a) **For what distinctive characteristics is it known in the state or nation?**

Largest Auto Program in The State of Michigan

b) **What are some strategies that could lead to (greater) recognition?**

8. Questions about Program Outcomes Assessment (attach additional sheets, if necessary):

See Attached Sheets

a) What are the program's learning outcomes?

NATEF document list. course, and program outcomes.

b) What assessment measures are used. both direct and indirect?

NATEF Standards/Service Floor· Coop Experience

c) What are the standards for assessment results?

NATEF standards are used and measured during the service floor and the co-op classes.
State and ASE certification

d) What were the assessment results for 2000-01?

e) How will / how have the results been used for pedagogical or curricular change?

Sequencing of class

9. Questions about Course Outcomes Assessment:

a) Do all multi-sectioned courses have common outcomes? YES

b) If not, how do you plan to address discrepancies?

c) Do you keep all course syllabi on file in a central location?

Yes. in Auto Center 101

***If you have questions about the outcomes assessment portions of this survey, please contact Laurie Chesley (x2713).**

Form Completed by_____Department Chair
Name and Title

Reviewed by Dean_____
Name and Date

Old Number	New Number	Title	Category
C37	C 037	RAM PICK UP BRAKE SYSTEM UPDATE (97)	BRAKE
C38	C 038	SOUND SYSTEM UPDATE (97)	ELECTRICAL
C39	C 039	A/C COMPRESSOR CLUTCH CIRCUITS & CONTROLS (97)	BODY
C40	C 040	WIND NOISE & WATER LEAKS (97)	BODY
C41	C 041	SENTRY KEY IMMOBILIZER SYSTEM (97)	ELECTRICAL
C42	C 042	98 DODGE TRUCK HIGHLIGHTS (97)	MISCELLANE
C43	C 043	98 CHRYSLER CONCORDE AND DODGE INTREPID NEW MODEL HIGHLI	MISCELLANE
C44	C 044	PROGRAMMABLE COMMUNICATION INTERFACE (PCI) DATA BUS (97)	ELECTRICAL
C45	C 045	2.7, 3.2, AND 3.5 LITER ENGINES (97)	ENGINE
C46	C 046	CHRYSLER LHS AND 300m HIGHLIGHTS, CONCORDE AND DODGE INT	MISCELLANE
C47	C 047	24 VALVE CUMMINS TURBO DIESEL ENGINE (98)	ENGINE
C48	C 048	COIL ON PLUG IGNITION SYSTEM (98)	ELECTRICAL
C49	C 049	ABS SYSTEMS UPDATE (98)	BRAKE
C50	C 050	OBD II MISFIRE MONITOR (98)	ELECTRICAL
C51	C 051	POWER SUNROOF DIAGNOSIS & REPAIR (98)	BODY
C52	C 052	45 RFE TRANSMISSION (98)	TRANSMISSIO
C53	C 053	4.7 LITER ENGINE HIGHLIGHTS	ENGINE
C54	C 054	99 JEEP GRAND CHEROKEE NEW MODEL HIGHLIGHTS (98)	MISCELLANE
C55	C 055	99 NEW MODEL HIGHLIGHTS (98)	MISCELLANE
C56	C 056	4ITE/AE & 42 LE TRANSAXLE REPAIR (27 MINUTES)	TRANSMISSIO
C57	C 057	4ITE/AE & 42 LE TRANSAXLE ELECTRONICS (32 MINUTES)	TRANSMISSIO
C9	C 058	Sounds & Vibrations RWD Vehicles	Transmission,
7?	C 059	Interactive speed control	Electrical
6?	C 060	Alternativly fueled vehicles	Transmission
C061	C 061	1996 ODB II and DRB III Update November 1996 - release date	
C062	C 062	DRB III Lab Scope September 1996 - Release 9	
C063	C 063	2000 Neon new model Highlights	
C064	C 064	Dodge Truck and Jeep Driveline update November 1998 - release 8	
C065	C 065	Mopar Diagnostic System 2	
C066	C 066	SBEC IIIA Engine Controller Features	
C 067	C 067	Mopar Diagnostic System 2 - Tool	
C 068	C 068	Cylinder Head Gasket Service	

Old Number	New Number	Title	Category
C 069	C 069	Engine Oil and Transmission Fluid Leak Detection May 1999	
C 070	C 070	Electrical Troubleshooting Using the MDS2 August 1999	
C 071	C 071	Special Tool and Labor operations time study 12/99	
C 072	C 072	41TE Transaxle Update 11/99	
C 073	C 073	Axle Diagnosis 10/99	
C 074	C 074	2000 New Model Highlights 9/99	
C 075	C 075	Vehicle Security Sytems update plus leak detection pump diagnosis 1/2000	
C 076	C 076	Flash Reprogramming plus electronic pinion Factor	
C 077	C 077	HVAC Systems update 10/2000	
C 078	C 078	2001 Sebring/Stratus Coupe - New model service highlights	
C 079	C 079	Vibration and Noise Diagnosis	
C 080	C 080	Dodge Ram 24 Valve cummins Turbo diesel update	
C 081	C 081	2001 Minivan Service highlights	
C 082	C 082	2001 PT Cruiser New Model Service highlights	
C 083	C 083	2001 Sebring/Stratus Sedan - New model service highlights	
C 084	C 084	2001 New Model service highlights	
C 085	C 085	Sebring/Dodge Stratus Coupes Transaxles	
C 086	C 086	New Vehicle preparation 2001	
C 087	C 087	2002 New Model Service Highlights	
C 088	C 088	2002 Dodge Ram Pickup (DR) New Model Service Highlights	
C 089	C 089	Passive Restraint systems update	
C 090	C 090	2002 Jeep, Liberty Service Highlights	
C 091	C 091	No-response Diagnosis	
C 092	C 092	Powertrain on-board diagnostics	
C 093	C 093	Next Generation controller and natural vacuum leak detection	
C 094	C 094	3.7L and 4.7L HO Engines	
C 095	C 095	Data recording diagnostics	
CBT 001	CBT 001	Tech II Familiarization 16048.15w	
CBT 002	CBT 002	Tech II Familiarization C6018.15	
CBT 003	CBT 003	Understanding Automatic Transmissions C7000.00	
CBT 004	CBT 004	Electrical/Electronics/ Stage 1 18043.01wk	
CBT 004B	CBT 004B	Electrical/Electronics/ Stage 1 18043.01wk	

Old Number	New Number	Title	Category
CBT 005	CBT 005	Electrical/Electronics/ Stage 2 18043.02w	
005B	CBT 005B	Electrical/Electronics/ Stage 2 18043.02w	
CBT 006	CBT 006	Electrical/Electronics/ Stage 3 18043.03w	
CBT 006B	CBT 006B	Electrical/Electronics/ Stage 3 18043.03w	
CBT 007	CBT 007	Chassis Electronics 13043-10W	
CBT 007B	CBT 007B	Chassis Electronics 13043-10W	
CBT 008	CBT 008	Auto Trans / Transaxle Diagnositcs 17041.20W	
CBT 008B	CBT 008B	Auto Trans / Transaxle Diagnositcs 17041.20W	
CBT 009	CBT 009	Install Disk for CBT Training	
CBT 010	CBT 010	AWD, 4Wd & Auto 4WD 14043-10W	
CBT 010a	CBT 010a	NV4500 Manual Transmission 17043.20	
BT 010aB	CBT 010aB	NV4500 Manual Transmission 17043.20	
CBT 010B	CBT 010B	AWD, 4Wd & Auto 4WD 14043-10W	
CBT 011	CBT 011	4T65-E Automatice Transaxle 17041.32w	
CBT 011B	CBT 011B	4T65-E Automatice Transaxle 17041.32w	
CBT 012	CBT 012	4L60-E Automatice Transmission 17041.27W	
	CBT 012B	4L60-E Automatice Transmission 17041.27W	
CBT 013	CBT 013	Battery, Chargine & Starting 16041.01W-r2	
CBT 014	CBT 014	1997-2002 Bi Fuel Vehicles: Mixer-based fuel systems 16240.30W	
CBT 014B	CBT 014B	1997-2002 Bi Fuel Vehicles: Mixer-based fuel systems 16240.30W	
CBT 015	CBT 015	4T80-E Automatic Transaxle 17041.30W	
CBT 015B	CBT 015B	4T80-E Automatic Transaxle 17041.30W	
CBT 016	CBT 016	Specialized Engine Repari 16013.all -S-CD	
CBT 017	CBT 017	Intro to Air Conditioning 11044.00	
CBT 017B	CBT 017B	Intro to Air Conditioning 11044.00	
CBT 018	CBT 018	Diesel Engine Performance 2001 16045.21	
CBT 018B	CBT 018B	Diesel Engine Performance 2001 16045.21	
CBT 019	CBT 019	Advanced HVAC Systmes Diagnosis 11045.10w	
CBT 019B	CBT 019B	Advanced HVAC Systmes Diagnosis 11045.10w	
CBT 020	CBT 020	4T40-E Automatic Transaxle 17041-26w	
T 020B	CBT 020B	4T40-E Automatic Transaxle 17041-26w	
CBT 021	CBT 021	4L80-E Automatic Transmission 17041.29w	

Old Number	New Number	Title	Category
CBT 021B	CBT 021B	4L80-E Automatic Transmission 17041.29w	
,T 022	CBT 022	GM Powertrain Performance I 16044.10w1	
,BT 022B	CBT 022B	GM Powertrain Performance I 16044.10w1	
CBT 023	CBT 023	GM Powertrain Performance II 16044-10w2	
CBT 023B	CBT 023B	GM Powertrain Performance II 16044-10w2	
CBT 024	CBT 024	NV3500 Manual Transmission 17043.10w	
CBT 024B	CBT 024B	NV3500 Manual Transmission 17043.10w	
CBT 025	CBT 025	Bosch 5 Series ABS / TCS 15045.20W	
CBT 025B	CBT 025B	Bosch 5 Series ABS / TCS 15045.20W	
CBT 026	CBT 026	Steering Service 13041.10 W	
CBT 026B	CBT 026B	Steering Service 13041.10 W	
CBT 027	CBT 027	GM Airbag Systems 22048.22W	
CBT 027B	CBT 027B	GM Airbag Systems 22048.22W	
CBT 028	CBT 028	Security Systems 19047.06W	
CBT 028B	CBT 028B	Security Systems 19047.06W	
CBT 029	CBT 029	4WAL ABS 15045.30W	
CBT 030	CBT 030	6.5L Diesel Engine 16046.10W	
CBT 031	CBT 031	Entertainment Systems I	
CBT 032	CBT 032	Entertainment Systems II	
CBT 033A	CBT 033A	OBD II 16040.02W	
CBT 033B	CBT 033B	OBD II 16040.02W	
CBT 034A	CBT 034A	GM Powertrain Preformance III 16804.10w3	
CBT 034B	CBT 034B	GM Powertrain Preformance III 16804.10w3	
CBT 036	CBT 036	Foundation Brakes / ABS Systems Service 15045.10W	
CBT 037	CBT 037	Body Structural Analysis & Alignment 22043.20W	
CBT 038	CBT 038	Body Controller 18043.16W	
CBT 039	CBT 039	Unibody Structural Repair 22043.29W	
CBT 040	CBT 040	Body-on-frame- Structural Repair	
CBT 041	CBT 041	Engine Mechanical/Diagnosis/Measurement	
CBT 042	CBT 042	Vibration Correction	
BT 043	CBT 043	Rear Axle & Propeller Shaft	
CBT 044	CBT 044	Meduim Duty Truck Air Brake Systems 95040.10W	

Old Number	New Number	Title	Category
CBT 045	CBT 045	Delphi Chassis Series 15045.40w	
CT 046	CBT 046	Waterleak and Windnoise Repair	
CBT-047	CBT-047	Structural Damage Analysis and Correction	
CBT-048	CBT-048	SI2000 Overview	
ASEP2	CPT 002	ZRI LTS Engine Mechanical	Engine
ASEP3	CPT 003	4.3 Liter Engine Mechanical (CPI)	Engine
ASEP4	CPT 004	4.1 Liter / 4.5 Liter Engine Mechanical	Engine
ASEP5	CPT 005	R134A Retrofit	Body
ASEP6	CPT 006	Basic Electronics	Electrical
ASEP7	CPT 007	Dual Zone Climate Control	Body
CPT 008	CPT 008	5.7 Gen III engine Mechanical	Engine
9?	CPT 009	Corvette 5.7L Gen III V8 Engine Mechanical	Engine
8?	CPT 010	Gen III Cast Iron Engine Mechanical	Engine
CPT 011	CPT 011	OBDII History & 1996 Features	
CPT 012	CPT 012	OBDII History/1995 Pontiac Features	
CPT 013	CPT 013	OBD II History/1995 Update	
CPT 014	CPT 014	Bravada Service Features	
CPT 015	CPT 015	Buick 3100 SFI	
CPT 016	CPT 016	Passkey III	
CPT 017	CPT 017	Passkey Self Diagnostics	
CPT 018	CPT 018	3.4L SFI (66U ECM)	
CPT 019	CPT 019	Catera Rear Axle	
CPT 020	CPT 020	Cadillac Fuel Injection Systems	
CPT 021	CPT 021	3100 SFI (66U PCM)	
CPT 022	CPT 022	GM Security Systems	
CPT023	CPT 023	Canister and EGR	
CPT024	CPT 024	Computer Command Control (CCC)	
CPT025	CPT 025	Servicing Computer Command Control	
CPT 026	CPT 026	R-134a Air Conditioning Systems	
CPT 027	CPT 027	Central SFI and SFI for trucks	
PT 029	CPT 029	Passlock Theft Deterrent System Diagnosis & Service 59407.03	
CPT 030	CPT 030	Venture Content Theft Deterrent 59407.05	

Old Number	New Number	Title	Category
CPT 031	CPT 031	Denali & Escalade BCM 58002.011	
PT 032	CPT 032	Service Programming System (SPS) 56010.00	
CPT 033	CPT 033	Corvette Engine Controls 56012.00	
CPT 034	CPT 034	5.7L Powertrain Controls 56012.01	
CPT 035	CPT 035	U-Van Power Sliding Door 58001.00	
CPT 036	CPT 036	Catera Powertrain Controls-99 update 56014.20	
CPT 037	CPT 037	1998 OBD II & Fuel Injection Update	
CPT 038	CPT 038	High Intensity Discharge Lighting System	
CPT 039	CPT 039	Hydra-Matic 4T60E Electronically Shifted Transaxle Diagnostics	
CPT 040	CPT 040	Hyda-Matic 4T60E Electronically Shifted Transaxle Oldsmoble	
CPT 041	CPT 041	4T40E System Diagnosis & Repair	
CPT 042	CPT 042	4T40E Transmission	
CPT 043	CPT 043	Wind Noise, Water leak, Squeak and rattle concerns, 2000 LeSabre and Bonn	
CPT 044	CPT 044	Duramax 6600 Diesel Engine	
CPT 045	CPT 045	Steering Column Service	
CPT 046	CPT 046	Delco Moraine ABS VI W/ Traction control	
CPT 047	CPT 047	Delco Moraine ABS - VI	
CPT 048	CPT 048	Delphi Brake Control 7 ABS (DBC7)	
CPT 049	CPT 049	Personal Automotive Security Systems	
CPT 050	CPT 050	Teves Maek IV ABS System	
CPT 051	CPT 051	On Board Diagnostics II	
CPT 052	CPT 052	Windshield Installation	
CPT 053	CPT 053	Aurora Frameless Windows	
CPT 054	CPT 054	Cutlass Convertible Top Repair	
CPT 055	CPT 055	Delco Moraine NDH ABS VI (ESB): Diagnosis And Service	
CPT 056	CPT 056	Catera 3.0L V-6 Engine - Mechanical	
CPT 057	CPT 057	F-Car Service Issues	
F103	F 001	1987 Electronic Fuel Injection 2470-002	Electrical
F104A	F 002	1988 AXOD Automatic Transaxle 1701-504	Transmission
F104B	F 003	1987 AXOD Automatic Transaxle 1701-504	Transmission
F105A	F 004	1987 C5 Automatic Transmission 1705-001	Transmission
F105B	F 005	1987 C5 Automatic Transmission 1705-001	Transmission

Old Number	New Number	Title	Category
F106	F 006	1987 Power Steering -- Rack & Pinion 1345-003	Brake
107	F 007	1987 Rear Axle Diag. And Overhaul 1500-007	Transmission
F108	F 008	19897 How to Read Vacuum Diagrams 0901-050	Miscellaneous
F109	F 009	Non EEC Driveablility Diagnosis (1986) 0901-052	Drive
F110	F 010	1986 EEC Driveability Diagnosis 0901-054	Drive
F111	F 011	1987 EEC - IV Self Test Procedures (83-83) 0901-224	Electrical
F112	F 012	1986 EEC System Operation 0901-053	Electrical
F113	F 013	1987 EEC - IV Driveablility & Diagnosis 0901-226	Electrical
F114	F 014	1987 Automotive Suspensions (4-wheel) 1010-224	Brake
F118	F 015	Mustang Convertible Leak Diagnosis 0940-005	Body
F119	F 016	Keyless Entry System 4300-002	Electrical
F120	F 017	Heated Glass System 4300-002	Electrical
F121	F 018	Basic Diesel Engine 2202-104	Engine
F122	F 019	Gasoline Engine Overhaul Techniques 2102-503	Engine
F124	F 020	Overhauling Diesel Engines 2202-006	Engine
F125	F 021	Engine Noise Diagnosis 2102-002	Engine
	F 022	Cylinder Head Service 2101-502	Engine
F127	F 023	Automotive Engine Lubrication System 2103-002	Engine
F128	F 024	Distributorless Ignition Systems 2103-103	Electrical
F134-1	F 025	Ford Diesel Engine Repair Procedures (1 of 4) ITT-88-1	Engine
F134-2	F 026	Ford Diesel Engine Repair Procedures (2 of 4) ITT-88-1	Engine
F134-3	F 027	Ford Diesel Engine Repair Procedures (3 of 4) ITT-88-1	Engine
F123-4	F 028	Ford Diesel Engine Repair Procedures (4 of 4) ITT-88-1	Engine
F139	F 029	Engine Noise Diagnosis	Engine
F140	F 030	Ford Basic Circuit Testing	Electrical
F144	F 031	Ford Engine Noise Diagnosis	Engine
F147	F 032	Ford Automotive Drivetrains	Transmission
F149	F 033	Ford Distributorless Ignition System	Electrical
F151	F 034	Electronic Steering	Brake
F158	F 035	Taking Charge, Understanding Batteries	Electrical
160	F 037	Electrical Systems Diagnosis	Electrical
F162-1	F 039	E4OD Diagnosis and Servicing Tips (1 of 2)	Transmission

Old Number	New Number	Title	Category
F162-2	F 040	E4OD Diagnosis and Servicing Tips (2 of 2)	Transmission
F163	F 041	Engine Noise and Leak Diagnosis	Engine
F165	F 042	Automatic Transmission Hydraulic/Mechanical Operation	Transmission
F166	F 043	1993 Villager VX54 Transaxle	Transmission
F167	F 044	AOD - E Transmission Theory and Diagnosis	Transmission
F172	F 045	AOD - E Transmission of the 90's Overview (33.00)	Transmission
F173	F 046	AXOD - E Automotbile Transaxle Theory & Diagnosis	Transmission
F174	F 047	1993 3.0 Liter Taurus Flexible Fuel Vehicle	Engine
F176	F 048	Unique Characteristics of Aluminum Engines	Engine
F177	F 049	4 x 4 Vehicle Features	Transmission
F178	F 050	Air Management & Controls	Body
F179	F 051	Refrigeration & Heating	Body
3?	F 053	Electronically controlled transmission diagnestics & service tips	Transmission,
4?	F 054	Manual Trans. Diagnosis, differential service, 4 X 4 diagnosis & repair	Transmission,
5?	F 055	1995 AX4N Transaxle Diagnosis & Repair	Transmission,
2?	F 056	CD4E Transaxle operation	Transmission
1?	F 057	Auto Trans FWD	Transmission,
11?	F 058	The fixed orfice	A/C System
12?	F 059	Technical Information sources	Miscellaneous
F 060	F 060	Ignition System Theory and Operation	
F 061	F 061	Powertrain update 94'	
F 062	F 062	Refrigeration and Heating, Operation, Diagnosis and Service	
F 063	F 063	Engine Noise and Leak Diagnosis	
F 064	F 064	Air Management and Controls - Operation, Diagnosis, and Service	
F 065	F 065	Engine Noise Diagnosis	
F 066	F 066	Engine Performance Intermittent Diagnosis	
F 067	F 067	Refrigeration and Heating - Operation, Diagnosis, and Service	
00-01	GM 001	Static Control	Electrical
00-02	GM 002	Torque Angle	Engine
00-03	GM 003	Tech 1 Familiarization	Electrical
01-01	GM 004	AC Refrigerant System Diagnosis and Repair	Body
01-02	GM 005	Pure Guard Refrigerant, R134A Leak Detection Dye	Body

Old Number	New Number	Title	Category
01-03	GM 006	Leak Detection and Contaminated Refrigerant	Body
01-05	GM 007	RT86 Supplement Air Conditioning System Flushing with R-11	Body
01-06	GM 008	Park Avenue - Le Sabre Automotive Climate Control	Body
01-07	GM 009	Diagnosing Heater Performance Symptoms	Body
01-08	GM 010	Dex - Cool GMC Trucks New Coolant	Engine
01-09	GM 011	Everything about AC Odors	Body
03-01	GM 013	Designing the Aurora Ride	Brake
03-05	GM 014	Lead/Pull vs. Torque Steer and Alignment Angle Update	Brake
03-06	GM 015	Variable Effort Steering Systems	Brake
03-13	GM 016	Power Steering Noise and Vibration	
03-09	GM 018	What Makes It Shake	Transmission
03-10	GM 019	Electronic Level Control	Brake
04-02	GM 020	Suspension Noise and Drive Axle Vibration	Brake/Transmis
04-03	GM 021	Gm Rear Axle - 11 Segments	Transmission
05-01	GM 022	Brake Pulsation	Brake
05-02	GM 023	Kelsey-Hayes 4WAL Brake System	Brake
05-04	GM 024	Brake Pulsation - Diagnosis and Correction	Brake
05-06	GM 025	Anti-Lock Brake Systems - How It Works For You	Brake
05-07	GM 026	Traction Control and Anti-lock Brakes	Brake
05-09	GM 027	Delco Maraine ABS III Part 2	Brake
05-10	GM 028	Teves Mark IV ABS with Traction Control and Computer Command Ride	Brake
05-11	GM 029	96 Delco/Bosch ABS 5	Brake
05-12	GM 030	ABS VI Update	Brake
05-13	GM 031	ABS Diagnosis & Repair	Brake
06-00	GM 032	Oil - Whats important, whats new and whats coming	Engine
06-11	GM 037	Fuel Related Driveability Problems	Drive
06-12	GM 038	Hot Fuel Handling	Electrical
06-13	GM 039	Central Sequential Fuel Injection	Electrical
06-22	GM 044	Diagnosing the Fuel Delivery System	Electrical
06-26	GM 046	Advanced Gas Engine Perforamnce Diagnosing	Drive
06-29	GM 049	Canister and EGR Part 1	Electrical
06-30	GM 050	Canister and EGR Part 2	Electrical

Old Number	New Number	Title	Category
06-37	GM 053	2.3 Liter Quad 4 Engine Series	Engine
06-38	GM 054	2.3 Liter Quad 4 Engine Series	Engine
06-39	GM 055	2.3 Liter Qaud 4 Engine Series	Engine
06-46	GM 056	Engine Sensor Basics	Electrical
06-47	GM 057	OBD II Diagnosis and Repair	Electrical
06-48	GM 058	2.3 Liter Quad 4 Engine Series	Engine
06-49	GM 059	Failure Determination and Diagnosis	Electrical
06-50	GM 060	Driveability Diagnosis - Engine Mechanical	Drive
06-51	GM 061	Driveability Diagnosis Scan Tool Operation and Usage Part 1	Drive
06-52	GM 062	Driveability Diagnosis - Reading the Data System	Drive
06-54	GM 063	Intermittent Driveability Conditions	Drive
06-55	GM 064	3300/3800 Driveability Update	Drive
06-56	GM 065	3.0 L, 3.8 L 3300-3800 Driveablility Diagnosis	Drive
06-57	GM 066	Driveablility Diagnosis Component Operation, Testing	Drive
06-58	GM 067	2.5 L T.B.I.	Engine
06-59	GM 068	Engine Noise Diagnosis	Engine
06-60	GM 069	Northstar Driveablility Diagnosis	Drive
06-62	GM 071	Driveability Diagnosis: Fuels	Drive
06-66	GM 072	Techline Vehicle Chuggle	Drive
06-68	GM 073	Diagnosing Catalytic Converters	Electrical
06-69	GM 074	3100 Engine Diagnotic Information	Engine
06-70	GM 075	On Board Diagnostics Gen II	Electrical
06-73	GM 078	Emissions Diagnosis and IM 240 Update	Electrical
06-75	GM 079	3300-3800 Engine Noise and Repair Techniques	Engine
06-76	GM 080	Central Multiport Fuel Injection System Diagnosis	Electrical
06-78	GM 081	Fuel Impact on Driveability	Drive
06-79	GM 082	EVAP Test Cart, 4T40-E Transaxle, Diagnostic Sniffer	Electrical & Tra
06-81	GM 084	Driveability Diagnosis/Reading the Data stream	Drive
06-83	GM 085	Driver Information Center	Electrical
06-84	GM 086	Driveablility Concerns & Diagnosis	Drive
06-85	GM 087	Avoiding Instant Comebacks	Miscellaneous
06-86	GM 088	Vibrations Diagnosis	Transmission

Old Number	New Number	Title	Category
06-88	GM 089	Fuel & Emissions - 96 Update	Electrical
06-89	GM 090	Vibration diagnosis Update	Transmission
06-91	GM 091	Vehicle Handling Concerns	Brake
06-92	GM 092	97 6.5 Engine Update	Engine
06-93	GM 093	Power Balance Probe	Miscellaneous
07-01	GM 094	4T80-E Diagnostic Techniques and Procedures	Transmission
07-02	GM 095	Hydramatic Transmission Transaxle Basic Operation	Transmission
07-03	GM 096	90-3 4T60-(440 T4) Diagnostic and Repair	Transmission
07-04	GM 097	Muncie Manual Transmission HM 290, H282	Transmission
07-05	GM 098	Pontiac 6000 STE AWD	Transmission
07-07	GM 099	5-Speed Manual Transaxles	Transmission
07-08	GM 100	Hydramatic Transaxle Diagnostics	Transmission
07-09	GM 101	Hydramatic THM 125 Unit Disassembly Part I	Transmission
07-10	GM 102	Hydramatic THM 125 Unit Reconditioning Reassebly Part 2	Transmission
07-11	GM 103	Hydramatic 4T60-4T60E Noise Diagnosis	Transmission
07-12	GM 104	Using the THM 200R4 Test Box J	Transmission
[illegible]	GM 105	Hydramatic THM 700R4 Disassembly	Transmission
07-14	GM 106	Hydramatic THM 700 R4 Reconditioning Reassembly	Transmission
07-16	GM 107	Hyddramatic 4T60 Transaxle Update	Transmission
7-17	GM 108	Transmission/Transaxle repair guidelines	Transmission
07-18	GM 109	440 T4 Unit Repair	Transmission
07-19	GM 110	Transaxle Update Part 1	Transmission
07-20	GM 111	Expertec Hydramatic 440 T4 Unit Repair Disassemsly	Transmission
08-01	GM 112	Electronic Diagnosis	Electrical
08-02	GM 113	CS Series Generators (Buick)	Electrical
08-04	GM 114	Electrical - Understanding the Circuit	Electrical
08-05	GM 115	Electrical - Troubleshooting	Electrical
08-06	GM 116	Electrical - Automotive Computer Operation	Electrical
08-07	GM 117	Tesing with Oscilliscopes	Electrical
08-11	GM 121	Working Smart with the Fluke 87 (23 min)	Electrical
08-12	GM 122	Testing with Oscilloscopes II	Electrical
08-14	GM 123	Tech I Diagnostic Hand Held Computer	Electrical

Old Number	New Number	Title	Category
08-15	GM 124	Testing Grounds (Olds)	Electrical
08-16	GM 125	Back to Basics in Battery Testing & Charging	Electrical
08-17	GM 126	Battery, Charging & Starting Systems	Electrical
08-18	GM 127	Battery Service	Electrical
08-21	GM 128	2.5 Liter Ignition System Operation	Engine
08-22	GM 129	GM 3.0/3.8 Liter Ignition System Operation	Engine
08-23	GM 130	Distributorless Ignition Systems	Electrical
08-24	GM 131	Controlling ESD	Electrical
08-25	GM 132	1996 Programmable Door Lock System	Electrical
08-26	GM 133	EVO Steering	Brake
08-30	GM 134	EVO Power Steering and Update: ABS	Brake
08-31	GM 135	Diagnosing Steering Shudder & Noise	Brake
08-32	GM 136	Power Steering Noise & Vibration	Brake
08-34	GM 137	Rack and Pinion Steering, ISO Front Strut Suspension	Brake
09-01	GM 138	Extended Life Coolant	Engine
09-03	GM 139	Remote Keyless Entry System	Electrical
09-05	GM 140	Quad Drivers and DTC's	Electrical
09-06	GM 141	GM Control Command (CCC) Series 1	Electrical
09-07	GM 142	GM Control Command (CCC) Series 2	Electrical
09-08	GM 143	RT 863 Basic Electronics 1 & 2	Electrical
09-09	GM 144	Olds DCS Information Systems	Electrical
09-10	GM 145	Engine Sensor Basics	Electrical
09-11	GM 146	Wiper Systems (19 min)	Electrical
09-12	GM 147	Cruise Control Update	Electrical
09-17	GM 148	Radio Systems Diagnosis	Electrical
09-20	GM 149	Enhanced Technical Assistance Systems (TAS)	Miscellaneous
09-22	GM 150	Electronic Accessories Encyclopedia	Electrical
09-23	GM 151	Electronic Cruise Control System	Electrical
09-24	GM 152	Cadillac Entertainment Systems	Miscellaneous
09-28	GM 153	Electrical Diagnosis	Electrical
09-29	GM 154	96 Achieva IPC	Electrical
09-31	GM 155	Electrical Component Diagnosis	Electrical

Old Number	New Number	Title	Category
09-32	GM 156	SIR	Electrical
09-38	GM 157	Automatic Climate Control	Body
09-39	GM 158	Sunroof Adjustment/Service	Body
10-06	GM 159	Using ACR4 Correctly, Lockring Installer, Power Sliding Door	Body
10-11	GM 160	Air in AC Systems, Tilt Steering, Service Programming, Coating and Sealing	Body
10-13	GM 161	Ultrasonic Sound Transmitter, UV Cure Body Filler, G-Van Features	Body
10-14	GM 162	A/C Odors, Diagnosing Current Flow, Minivan Fuel Injector Test Harnesses	Body
10-15	GM 163	4.3L V-6 Sparkplugs, C/K and S/T Extended Cab Access Doors, 4L60-E Tran	Engine, Body,
10-16	GM 164	Power Steering Bleeding, A/C Leak Detector Maintenance, Using the Electron	Brake, Body, Tr
11-01	GM 165	Natural Gas Fuel System - Overview & Diagnosing	Electrical
12-01	GM 166	1997 Corvette Driveline Service	Transmission
??	GM 167	Air conditioning Part 1 Dual Zone System Update	Body
12-03	GM 168	Transaxle Update Part 2	Transmission
12-05	GM 169	Corvette Instrument Cluster, Magnasteer, EVO Diagnosing	Brake, Electrica
12-08	GM 170	Introduction to ABS VI	Brake
12-09	GM 171	Fuel Economy Diagnostics	Electrical
12-10	GM 172	High Exhaust Emissions Diagnosis	Electrical
12-11	GM 173	Air Conditioning Part 2 - Servicing Issues	Body
12-14	GM 174	98 Intrigue - Service Update	Miscellaneous
12-15	GM 175	Bravada Driveline/Vibration Update	Transmission
12-16	GM 176	The Cutlass BFC, Intrigue BCM, and the Class 2 Serial Data Line	Electrical
12-17	GM 177	Electronic Ignition Systems - 96 Update	Electrical
12-18	GM 178	3100 & 3800 Driveability Diagnosis	Drive
12-19	GM 179	ABITS Operation & Diagnosis	Brake
12-20	GM 180	4WAL Modulator Service	Brake
12-21	GM 181	SIR Overview	Electrical
12-22	GM 182	Drivetrain Noise & Vibration	Transmission
12-23	GM 183	Enhanced Evaporative Emissions	Electrical
12-24	GM 184	Serial Data Lines Part 1 - Review & Update	Electrical
12-25	GM 185	Serial Data Lines Part 2 - Diagnosis	Electrical
12-26	GM 186	Passlock Theft Deterrent	Electrical
12-27	GM 187	Diagnosing BCM Concerns - "Thinking Like a Box"	Electrical

Old Number	New Number	Title	Category
GM#46	GM 188	Achieva Multifunction Alarm Module - 96 Update	Electrical
M #45	GM 189	The 93 Achieva Multifunction Alarm System	Electrical
? ?	GM 190	The Freon Story and the ACR3 System	Body
Misc46	GM 192	Tech 2 Get Off to the Right Start	Electrical
Misc	GM 193	Cellular Phone Installation	Electrical
Misc1	GM 194	Flash EPROM Service Programming	Electrical
misc2	GM 195	Cadillac Catera	Miscellaneous
misc3	GM 196	97 Cadillac Deville	Miscellaneous
misc4	GM 197	Catera Power & Performance, Stabili Trak Technical Highlights	Miscellaneous,
misc5	GM 198	Fuel Quality, Service, Benefit Selling	Electrical
12-28	GM 199	Corvette Service Bulletins, Memory Functions, Body Adjustments	Electrical, Body
12-29	GM 200	Mall Modules, 96-98 Eighty Eight, Ninety Eight, Aurora	Electrical
03-15	GM 201	Vibration diagnosis & correction	Transmission,
7-6	GM 202	Diaphragm Spring Clutch for medium duty trucks	Transmission,
GM207	GM 204	IM240	Drive
GM38	GM 205	Basic Electronics Parts 3 & 4	Electrical
6-72	GM 206	Driveability Diagnosis Scan Tool Operation & Usage Part 2	Electrical
6-16	GM 207	Using the new fuel injector tester	Electrical
12-30	GM 208	99 Pontiac New model features	Miscellaneous
12-31	GM 209	99 Cadillac new model features	Miscellaneous
09-33	GM 210	Memory Seat, Mirrors	Electrical
6-1	GM 210	Using section 6E easily	Miscellaneious
09-35	GM 211	EMI/RFI	Electrical
6-77	GM 211	Gasoline Fuel Injection Driveability	Electrical
09-36	GM 212	Daytime Running Lamps	Electrical
14?	GM 212	Fuel injector testing, Gasoline Testing	Electrical
15?	GM 213	Chevrolet OBD II	Electrical
6-42	GM 214	O2 Sensor Service	Electrical
6-43	GM 215	Mass Air Flow Sensor Testing	Electrical
6-12	GM 216	Hot Fuel Handling	Electrical
GM217	GM 217	Intrigue Steering and Suspension - Noise and Feel Diagnosis	
GM218	GM 218	Diag & Repair of Water Intrusion in Elect circuits- Example ABS	

Old Number	New Number	Title	Category
GM219	GM 219	Supplemental Inflatable Restraint - GM Generation I	
`M220	GM 220	Radios- Current Concerns	
GM221	GM 221	1999 Oldsmobile New Model Features	
GM222	GM 222	1999 Chevrolet New Model Features	
12-6	GM 223	VATS/PASS-Key Interrogator, Cavalier Convertible Top Service, Integrated S	
GM 224	GM 224	Crankshaft Position Variation Learn, Veh Data Recorder, 1997 Master Tech A	
GM 225	GM 225	Prizm Side Air Bags, EVAP Purge Solenoid Valve, Injector Test & Svc, Corvet	
GM 226	GM 226	Multec 2 Fuel Inj sys, Torque Angle Gauge, BEC Pliers, Silverado Auto Door	
GM 227	GM 227	Refrigerant Leak Detector J39400 r-12/r134a	
GM 228	GM 228	Doors Won't Unlock Diagnostics Using Class 2 data	
GM 229	GM 229	Intermittent Stall Diagnosis	
GM 230	GM 230	Intermittent Rough Idle Diagnosis	
GM 231	GM 231	Controlling Electrostatic Discharge	
GM 232	GM 232	Intro to ESI A video overview classroom support video	
GM 233	GM 233	Using Tech 2 Snapshot and 02 Sensor Update	
GM 234	GM 234	Rear Wheel Antilock Brakes	
.M 235	GM 235	Auto Transfers Case, Osygen Sensors, Snapshot setup, colourmatch system	
GM 236	GM 236	New Tech 2 DTC Display, CS Generator tester, digital battery tester, Cavalier	
GM 237	GM 237	1999 Cheevrolet New Model Features	
GM 238	GM 238	1999 Cadillac New Model Features	
GM 239	GM 239	1999 Chevrolet Silverado New Model Features	
GM 240	GM 240	1999 Pontiac Grand Am New Model Features	
GM 241	GM 241	1999 Oldsmobile New Model Features	
GM 242	GM 242	1999 Oldsmobile Alero New Model Features	
GM 243	GM 243	2000 Chevrolet Impala New Model Features	
GM 244	GM 244	2000 Chevrolet Implala New Model Features	
00	H 001	Power Steering Service	Brake
01	H 002	Air Conditioning Service & Testing	Body
Misc02	M 001	Its Coil Spring Time, Alignment	Brake
Misc03	M 002	Clayton Brake Cleaning Equipment	Brake
Misc04	M 003	Water Leak Diagnosis and Repair	Body
Misc05	M 004	Take Aim on Profits	Miscellaneous

Old Number	New Number	Title	Category
Misc06	M 005	Atra THM 125	Transmission
Misc07	M 006	Cylinder Head Service	Engine
Misc08	M 007	Seals, Gaskets and Sealers	Engine
Misc09	M 008	Principles of Driveability Diagnosis	Drive
Misc10	M 009	Modine Radiator Gasket Replacement	Engine
Misc11	M 010	Modine Beta Weld	Engine
Misc12	M 011	Modine Radiator Diagnosis	Drive
Misc13	M 012	The Men Under the Hood	Engine
Misc14	M 013	Power Rack and Pinion Steering	Brake
Misc15	M 014	Give Me a Brake	Brake
Misc16	M 015	In the Clutch	Transmission
Misc17	M 016	Hot Tips for Cool Profit, Transmission Cooler	Transmission
Misc18	M 017	Rotary Engine (86)	Engine
Misc22	M 018	Measuring and Calculating Driveshaft Angles, Theory of Non Uniform Velocity	Transmission
Misc24	M 019	Wynn's Airsept	Miscellaneous
Misc25	M 020	Mac's Training Review	Miscellaneous
Misc26	M 021	Snap-On Tire Balancing	Brake
Misc27	M 022	What About Lubricants?	Engine
Misc28	M 023	Jasper Engines	Engine
Misc29	M 024	Du-All	Engine
Misc30	M 025	Felpro	Engine
Misc31	M 026	Felpro	Engine
Misc32	M 027	Felpro	Engine
Misc33	M 028	Felpro	Engine
Misc34	M 029	Felpro	Engine
Misc35	M 030	Felpro	Engine
Misc36	M 031	Felpro	Engine
Misc37	M 032	Felpro	Engine
Misc38	M 033	Packard Electric Repair	Electrical
Misc40	M 034	Sealed Power Rack and Pinion	Brake
Misc42	M 035	?	?
Misc44	M 036	The Fluke 98 Automotive Scopemeter	Electrical

Old Number	New Number	Title	Category
Misc50	M 037	Sun Electric - Low Amps Probe	Electrical
Misc51	M 038	A Historical Perspective of the EVI	Miscellaneo
Misc52	M 039	Snap-On Vantage Power Graphing Meter	Miscellaneo
13?	M 040	VICA - Reaching for the top - 1996	Miscellaneo
M 041	M 041	Infiniti Engine Noise Rotating Parts	
M 042	M 042	Infiniti Engine Noise Valve Mechanism	
M 043	M 043	Infiniti Engine Noise - Belts	
NPT 001	NPT 001	Deville 2000 New Model Technical Features	
NPT 002	NPT 002	Cadillac 2000 New Model Technical Features	
NPT 003	NPT 003	Buick 2000 New Model Technical Features	
NPT 004	NPT 004	Pontiac 2000 New Model Technical Features	
NPT 005	NPT 005	Bonneville 2000 New Model Technical Features	
NPT 006	NPT 006	Chevrolet 2000 New Model Technical Features	
NPT 007	NPT 007	Aurora 2001 New Model Technical Features	
NPT 008	NPT 008	2001 Oldsmobile New Model Features	
NPT 009	NPT 009	2001 Chevrolet / GMC Truck New Model Features	
.PT 010	NPT 010	G Van Sliding Door repair	
NPT 011	NPT 011	OnStar VS-P and VS-3B Communication Systems Diagnosis and Repair	
NPT 012	NPT 012	Wind Noise, Water Leak, Squeak and Rattle Concerns - 2000 LeSabre and B	
NPT 013	NPT 013	Engine Performance Issues	
NPT 014	NPT 014	4200 Engine Familiarization	
NPT 015	NPT 014	Versatrak All Wheel Drive System	

Equipment List

Type	Number	Name	Tool #
Batt			
	015	Battery Drain Test Adapter	
	029	HYDROMETER	
	040	JUMP & CARRY (JUMP BOX)	
	054	MIDTRONICS DIGITAL BATTERY ANALYZER MICRO 400	
Body			
	048	HEADLIGHT AIMER	
Brakes			
	Misc	Grizzley Grinder,5/8 Drill Motor,Spring Compressor	
	139	Universal brake caliper tool	
CategoryNumber			
Cool			
	074	Anti Freeze Tester	
	002	Briggs Cooling System Diagnostic Tester (ASSET)	
	024	PH ANTIFREEZE TESTER	
	044	RADIATOR PRESSURE ADAPTOR KIT	
	049	RAPID EVACUATION TOOL	
Diag			
	092	Accutrak Ultrasonic leak detector	J41416
	005	AMC CEC Fuel Feedback System Tester	ET-501
	088	Bluepoint dvom	
	043	BOSH EFI TESTER	
	080	Cap EVA Vibration Analyzer	0T38793
	094	Deluxe Vacuum Pump	7559
	032	DRBIII - CHRYSLER SCAN TOOL 32A, 32B, 32C	
	079	DRBIII - Super	
	001	Electronic Ear Probe (ASSET)	
	084	Emissions Gas Analyzer	
	093	Exhaust Back Pressure Tester	J-35314-A
	019	FORD EEC-IV Monitor Recorder	007-00021
	018	FORD EEC-IV Monitor System	
	011	Ford Electronic Engine Control IV Breakout Box (EEC-IV)	T83L-50-EEL-I
	023	FORD NEW GENERATION STAR TESTER (ASSET)	007-00500
	003	Ford Star Tester	
	102	G-Car Vats/Pass Harness Adapter	J35628-100
	095	Gas Quality Analyzer	J-39383-A
	009	GM Expertic (TECH 1)	
	097	Injector selector switch box	J 39021-210
	055b	INTERROGATOR	J35628
	055a	INTERROGATOR	J35628
	102	Interrogator adapter	J35628-95
	013A	Kent Moore Cruise Tester	J-34185-A
	013	Kent Moore Cruise Tester	J-34185-A
	068	Kent Moore Universal break out box	
	120	Leak Chek	
	121	MDS2 Co-Pilot	
	016	Monitor 4000	
	078	OTC - Dart Reprogramming Tool Kit	0T6000
	012	OTC Anticipator System 2000	
	007	OTC Monitor II	3455
	006	OTC System 2000	
	091	Port fuel injection diagnostic Kit	J34730-E
	127	Refrigerant leak detector	J39400-a
	022c	Snap-on Scanner Chrysler Primary Cartridge 1983-93	
	022b	Snap-on Scanner Ford Primary Cartridge 1981-93	

Type	Number	Name	Tool #
	022a	Snap-on Scanner GM,Ford,Chry (Troubleshooter thru 92)	
	022d	Snap-on Scanner GM Primary Cartridge 1980-93	
	021	Snap-on Scanner/Diagnostic Tester	
	031	TECH I-OBD ADAPTOR	
	034	TECH II 34A,34B	
	026	TECH-1 GM TECHLINE 26-A,26-B	
	102	VAT / Pass Harness Adapter	J35628-90
	122	Wire Lyzer	
	086	Yodogawa Refrigerant Gas Analyzer	GA500
Diagnostic			
	117	Delco Audio System Diagnostic kit	J39916-a
	138	DRB II transmission - Body adapter cord	
	116	Spark Plug Wires (Testing)	
Diesel			
	041	DIESEL FUEL INJECTION TESTER	
Drive Lines			
	050	CV BAND CLAMP TOOL	
	052	CV BAND CLAMP TOOL	
	051	CV BAND CLAMP TOOL	
	017	EVA (Instructor Check Out Only)	J38792
	046	PILOT BUSHING ALIGNMENT TOL	
	Misc	Seal Drivers, Four Wheel Drive Sockets, 3/4 Drive Sockets	
	143	Tapered roller bearing puller set	
Elec			
	064	A AMP PROBE (SNAP-ON)	
	098	Adjustable Ignition Spark Tester	
	045	BUZZ BOX	
	038	DIGITAL MULTIMETER (DVOM)	
	[illegible]63	DRB Adapter Leads	
		IDLE ABV (AIR BYPASS VALVE) SOLENOID TESTER IAC/ISC TEST	
	099	Injector harness load tester	J-34730-380
	033	KENT MOORE VEHICLE SIGNAL GENERATOR	J38522
	069	Load Tester for short testing	
	065	Low Amp Probe (Snap-On)	
	073	Multi Meter	
Elec.			
	082	Signal Generator / Instrument Panel Tester	J33431
Electronic			
	137a	Borroughs shortell	
	137b	Borroughs shortell	
	119	Connector Test Adapter Kit	J-35616-A
	136	GM Electronic Ignition System Breakout box #335	
	135	GM PCM Breakout box #334	
	130	Instrument gauge tester	BT7707A
	069b	Load Tester for short testing	
	129	Photo Tach	
	114	Serial Data Link Tester	J-42236-A
	144	Soldering gun	
Eng			
	060	COMPRESSION GAUGE HOSES	
	081	Crankshaft Sensor Adjuster/ Balancer Checker	
	047	CYLINDER BORE GAUGE	
	061	CYLINDER LEAK DETECTOR (SNAP-ON)	
	062	CYLINDER LEAK DETECTOR (SNAP-ON)	
	059	DIAL BORE GAUGE	
	067	Power Balance Probe 9Snap-On)	J39700
	042	SNAP-ON COMPRESSION TESTER 42A,42B	

Type	Number	Name	Tool #
	028	SNAP-ON OIL PRESSURE GAUGE SET	
	087	Timing Light	
Engine			
	128	Block Tester	
	147	Cooling system pressure tester & Adapter	
Fuel			
	118	5.0L / 5.7 L Fuel Injector test harness	J239021-302
	010	Ford Fuel Pressure-Vacuum Adapter	007-00022
	035	FUEL INJECTION TESTER (KENT-MORE)	J39021
	076	FUEL INJECTOR CLEANER	
	109	Fuel Line Disconnect Tools (6 diff sizes)	
	104	Fuel line shut off adapters 3/8"	J-37287-1
	104	Fuel line shut off adapters 5/16"	J37287-2
	113	Fuel Line Shutoff Adapters	J-42873
	072	Fuel Pressure Test Kit Crib	
	102	Fuel Tank adapter	J-41415-40
	096	Fuel Tank Adapter	J-41415-40
	101 A	Fuel Tank Adapter	J-41415-10
	101 B	Fuel Tank Adapter	J-41415-20
	106	Fuel tank adapter (threaded type)	J-41415-30
	131	Gas check kit	J-39383-A
	036	GAS CHECK M-1145	
	148	Microgas Tach/Temp Adapter	
	075	OTC ELECTRONIC FUEL INJECTOR TESTOR 75A & 75B	
	008	OTC Fuel Injection Tool Kit	7233
	134	Propane enrichment tool	
	115	TBI Fuel Pressure Gage	J-29658
Met/Elec			
	027	JUMPER CABLES	
Meter			
	125	Dial Indicator gauge	2904fsx
	020	Digital Thermo/Pyrometer	
	014	Fluke Automotive Meter 14A, 14B	
	124	Fuel displacement gauge	J-41990
	123	Micrometer Set	
	030	NON-CONTACT TEMP. MEASUREMENT TOOL (DAYTER)	
	103	Slack Tube Manometer	
	025	TEKMETER 25A,25B,25C,25D,25E,25F	
	105	Vacuum meter	J-41418
Misc			
	146	1/2" Drill	
	141	1/2" Impact wrench set	
	145	3/8" Drill	
	063	A & B POP RIVET GUNS	
	004	Chrysler Miller Tool	L-4805
	058	DIAL INDICATOR WITH VISE GRIP BASE	
	085	DRB III Transducer	
	140	Lug Nut Sockets	
	132	R134-A Dye/Oil Injector	J-41459
	112	Relay Removal Pliers	J-43244
	056	TORGUE ANGLE METER	
	089	Transmission Fluid Flushing adapters	
	142	Two 3/8" Impact wrenches	
	133	Valve spring compressor	
Misc Hand/Precis			
	057	INSIDE MICROMETER	
Misc Tool			

Type	Number	Name	Tool #
	053	DIE GRINDER AND BITS	
Sir			
	039	S.I.R. DRIVER PASS LOAD TESTER	
	110	Side Airbag load tool adapters (3 adapters)	J-38715-30,45,5
	111	SIR Arming Sensor Tester	J-39879
Tool			
	066	Air Cut-Off Tool	
	108	Oxygen Sensor Socket	J-39194
	107	Oxygen Sensor Socket	j-38756
	126	Small Hole gauge	
Tools			
	090	Balljoint press	
	070	Deadblow Sledge Hammer	
	Misc	Drill Bit Assortment,Easy Outs,Air Engraver	
	071	Ir Air Impact Gun	
	Misc	REAR HUB PULLER	
Trans			
	077	Transmission Coolant Flusher	

Model	Make	Year	FSU#;	Color	engine	Trans	ABS	Dash	Cruise	A/C	SRS
			AT #52								
			AT #30								
			AT #23								
			AT #22								
			AT #17								
			AT #51								
			AT #13								
			AT #57								
			AT #58								
			AT #35								
			AT #09								
Audi											
	A4 Quattro A6	1999	AT #11	Red	2.8l	5SPD a	ves	No	Yes	Yes	Yes
Chrysler											
	Prowler	2000	AT #41	red	3.5L	Auto	No	No	Yes	Yes	Yes
	PT Cruser		AT #63	Red	2.4L	5spd m	Yes	NO	Yes	Yes	Yes
DODGE											
	1500 Pick-up	2002	AT #64	Black	4.7L V	4spd au	Yes	No	Yes	Yes	Yes
	2500 P/U	1995	AT #04	Red	V-10	4spd	Yes	No	Yes	Yes	Yes
	Durango	1998	AT #07	green	5.9L	3spd O	Yes	No	Yes	Air	Yes
	Durango	1998	AT #53	Silver	5.2L	Auto	Yes	No	Yes	A/C	Yes
	Intreped	2000	AT #62	Black	3.2	autostic	Yes	No	Yes	Yes	Yes
	Intrepid	1998	AT #08	white	3.2L	5spd	Yes	No	Yes	Yes	Yes
	Neon	1999	AT #03	red	2.0L	AUTO	no	ves	ves	ves	Yes
	Ram Red PU	1998	AT #12	red	5.2	Auto	Yes	No	Yes	Yes	Dual
Jeep											
	Grand Cherokee	1999	AT #49	BURG	4.7	AUTO	YES	NO	YES	YE	YES
	Grand Cherokee	1999	AT #28	Platinum	4.7	4spd au	ves	no	ves	ves	ves
	Liberty	2001	AT #65	Black	3.7L V	3spd au	Yes	No	Yes	Yes	Yes
	Wrangler	1997	At #10	White	2.5l	5spd	No	No	No	No	Yes
	Wrangler	1997	AT #29	green	4.0L	AUTO	Yes	Yes	NO	YE	YES
FORD											

...odel	Make	Year	FSU#;	Color	engine	Trans	ABS	Dash	Cruise	A
	Contour	1998	AT #48	Black	2.5L	5spd M	Yes	No	Yes	A
	Cougar	1999	AT #79	Red	2.0L	4spd	No	No	Yes	Ye
	Crown Victoria	1996	AT #43	burgandy						
	E150 Van Storage ve	1996	AT #24	red						
	E250 Diesel Van	1996	AT #36	blue	7.3 DI	Auto	Rear	No	No	No
	Escort	1998	AT #69	Silver	2.0L	4spd od	No	No	Yes	Yes
	Explorer	1996	AT #44	green	4.0L	Auto	Yes	No	Yes	Air
	F150 4x4	1997	AT #45	grey	4.6L	5spd M	Yes	No	Yes	Air
	Mustang	2001	AT #54	Yellow	3.8L	Auto	No	No	Yes	Air
	Ranger 4X2	1996	AT #33	green	4.0L		No	No	Yes	No
	Ranger 4X4	1992	AT #05	red/silver	4.0L	AXOD		No		Air
	taurs gl	1996	AT #37	red						
	Thunderbird	1996	AT #42		4.6l	Auto	Yes	Yes	Yes	Yes
	Windstar	1995	AT #21	lt blue	3.8L	ATOD	No	No	Yes	Air
Lincoln										
	Lincoln Continental	1995	AT #47	green	4.6L	ATOD	Yes	Yes	Yes	Air
	Towncar	1996	AT #02	pearl	4.6L	AXOD	Yes	No	Yes	AC
Buick										
	Buick Regal GS	1997	AT #40	burgandy	3800	5spd	Yes	No	Yes	Yes
	Buick Rivera	1998	AT #32	green	3.8 S/	4sp aut	Yes	No	Yes	Yes
	LeSabre	2000	AT #19	pewter	3800	Auto O	Yes	No	Yes	Yes
	Regal	1999	AT #06		3800	ATOD	Yes	Yes	Yes	Air
Cadillac										
	DeVille	1999	AT #38	teal	4.6L	5spd	Yes	No	Yes	Yes
Chevy										
	Blazer	1998	AT #56	gray	4.3L	4spd au	Yes	No	Yes	Yes
	Corvette	1995		red	5.7L	6 spd.	N	YES	yes	yes
	excab pick-up4x4	1998	AT #15	lt blue	5.7L	4spd A	Yes	No	Yes	No
	Impala	2000	AT #88		3.8L	4SPD	Yes	No	Yes	Yes
	Malibu	1998	AT #20	White	2.4L	Auto	Yes	No	Yes	Yes
	pick-up	1998	AT #14	green	5.7L	auto	Yes	No	Yes	No
	Silverado X-Cab PU	2000	AT #89		5.3L	3SPD	Yes	No	Yes	Yes
	Suburban	1996	AT #26	white	5.7L	Auto	Yes	No	yes	Yes
	Tahoe	2001	AT #82	Silver	5.3l	4spd au	Yes	No	Yes	Yes

Model	Make	Year	FSU#;	Color	engine	Trans	ABS	Dash	Cruise	A/C	SRS
	Venture	1997	AT #05-	silver	3400 S	AUTO	Yes	No	Yes	Yes	Yes
GMC											
	P/U Truck	1998	AT #50	green	5.7	4-auto	Yes	No	Yes	Air	No
	Savana Van	1998	AT #34	BURG	5.7	AUTO	YES	NO	YES	YE	YES
	Sierra	2001	AT #39	white	8100	6spd	Yes	No	No	Yes	Yes
	Sonoma	2000	AT #87	BLACK	2200	5SP M	YES	NO	YES	YE	YES
Olds											
	Alero	1999	AT #59	gold	3400	4spd au	Yes	No	Yes	Yes	Yes
	Intrigue	1998	AT #31		3800 II	Auto	Yes	No	Yes	Yes	Yes
Pontiac											
	Bonneville	1995	AT #16	green	3.8L	4spd A	Yes	No	Yes	Yes	Yes
	Grand Am	1999	AT #25	Silver	3.4L	4spd	Yes	No	Yes	A/C	Dual
	Grand Prix	1999	AT #18	RED	3.8L	Auto O	YES	No	YES	Yes	Yes
	Montana	2000	AT #46	RED/GR	3400	4-SP/O	YES	NO	YES	YE	YES
Saturn											
	Saturn	1999	AT #61	green	1.9L	4spd au	no	ves	no	ves	ves
	Saturn	1999	AT #27	white	1.9 OH	5spd m	no	ves	Yes	ves	Yes
NISSAN											
	Altima GLE	2001	AT #66	Pewter	2.4L	3spd au	Yes	N		Yes	Yes
	D-21 Pick-up	1996	AT #60	red	2.4L	3spd O	No	No	Yes	Air	Yes
	Extera SE	2001	At #68	Bronze	3.3L	4spd au	Yes	No	Yes	Yes	Yes
	Frontier EX cab P/U	2001	AT #67	Red	3.3L	5spd M	YesY	No	Yes	Yes	Yes
	Quest	1996	AT #55	blue	3.0L	4spd					

AUTOMOTIVE SERVICE 4-15131 SL Account Summary by Code - Comparison

Object Code	Description	2001/2002	2000/2001	1999/2000	1998 / 1999	1997 / 1998	1996 / 1997
			Actual	Actual	Actual	Actual	Actual
490	INTERNAL INCOME				-		(132.77)
535	MISC. INCOME					31.17	(231.81)
540	MISC. SALES-NO T	(10,619.74)	(12,726.51)	(13,267.60)	(10,627.89)	(17,608.41)	(17,019.19)
545	MISC. SALES-TAXA	(53,803.75)	(50,103.47)	(52,927.09)	(60,980.49)	(60,339.08)	(39,541.67)
661	SLS-SAFETY KLEEN	-	-	(87.00)	(187.00)	(372.34)	
662	SLS-SUPPLY & MAT	(2,616.88)	(3,062.47)	(2,644.94)	(3,061.58)	(3,358.65)	(1,302.87)
664	SLS-SUBLET	(1,190.00)	(723.20)	(681.25)	(282.00)	(157.50)	(43.00)
665	SLS-TELEPHONET C	(3.15)	-	(6.30)	(16.70)	(19.09)	(10.50)
666	SLS-UPS	(8.26)	(4.95)	(4.00)	(11.54)	(12.00)	(57.77)
	REVENUES	(68,241.78)	(66,620.60)	(69,618.18)	(75,167.20)	(81,835.90)	(58,339.58)
		100%	100%	100%	100%	100%	100%
750	RENT-FACILITIES						(3,000.00)
999	MISC COST OF GOO	43,362.90	44,214.99	46,979.91	49,010.25	56,071.42	37,326.19
	COST OF GOODS SOLD	43,362.90	44,214.99	46,979.91	49,010.25	56,071.42	37,326.19
	NET REV(REV-COGS)	(24,878.88)	(22,405.61)	(22,638.27)	(26,156.95)	(25,764.48)	(24,013.39)
% of NET REV(REV-COGS)/Revenue		**36%**	**34%**	**33%**	**35%**	**31%**	**41%**
	1600 PART TIME ADULT	8,968.50	7,983.00	8,474.50	7,310.00		
	SALARIES	8,968.50	7,983.00	8,474.50	7,310.00		
2100	EMPLOYEE BENEFIT	915.67	1,037.76	1,271.12	1,827.46		
	BENEFITS	915.67	1,037.76	1,271.12	1,827.46		
	SALARIES & BENEFITS	9,884.17	9,020.76	9,745.62	9,137.46		
% of SALARIES & BENEFITS/Revenue		**14%**	**14%**	**14%**	**12%**	**0%**	**0%**
3000	MAT & SUPPLY BUD				-		
3125	BREAKAGE	1,841.30	2,621.16	3,404.67	2,757.71	2,196.95	1,396.40
% of BREAKAGE/Revenue		**3%**	**4%**	**5%**	**4%**	**3%**	**2%**
	HAZ. WASTE REMOV	434.55	998.74	925.83			
3200	CLOTHING & Laundry	106.25	199.70	519.13		247.30	164.44
3225	COPY CENTER EXPE	159.90	20.75	305.59	71.70	6.50	28.88
3310	CONF & REGISTRA	160.00					
3325	EDUC/CLASS RM SUP	226.98	-	1,036.96	1,701.24	2,480.82	1,871.51
3330	EDUCATIONAL SUPPORT						932.35
3450	FREIGHT		-	3.00	34.48	338.78	49.73
1500	GAS AND OIL	264.50	292.15	256.49	140.64	132.59	114.72
3525	GENERAL MAINTENA	1,547.92	937.08	1,671.84	2,579.47	837.41	683.44
3600	MATERIAL - NON P						450.52
3625	MEDICAL		12.00	-	4.35		
3675	MISC. EXPENSE	1,599.28	1,455.00	163.47	396.19	133.15	11.00
3700	MISC. SUPPLIES				883.38	1,062.77	1,918.51
3725	OFFICE SUPPLIES	361.17	353.79	165.64	232.64	1,207.23	261.97
3825	PRINTING				52.28	46.00	286.52
3855	PURCH CD PURCHAS	17.88					
3975	INVALID OBJ CODE						970.92
3999	EQUIPMENT UNDER	898.55	393.85	1,094.73	1,381.62	1,012.52	835.20
4450	TRAV-IN STATE-ST				124.99	89.00	
5025	ADVERT/PUB PROMO		109.47	190.00	114.28	55.80	
5101	CREDIT CARD DISC	525.24	806.01	455.12	453.56	629.14	119.76
5300	INSURANCE PREMIU	409.07	-	228.93	406.42		
5450	LAUNDRY		-		104.55	164.90	118.15
5800	TELEPHONE EQUIPM	1,771.11	1,918.26	1,876.68	2,009.93	1,770.95	1,654.40
5801	TELEPHONE TOLLS						21.74
5802	TELEPHONE - WATS	734.31	831.48	679.96	560.88	702.61	810.28
6650	MAINT/REP-EQUIPM		-	9.52	1,132.95	525.00	859.42
6651	M&4-PLT STR UPLD	553.77	205.66	186.82			
6750	MAINT/REP-MOTOR	678.66	268.00	937.34	1,369.73	581.29	705.01
	SUPPLY & EXPENSE	12,290.44	11,423.10	14,111.72	16,512.99	14,220.71	14,264.87
7000	EQUIPMENT BUDGET				-		
	EQUIPMENT		(8,515.87)	10,120.00	-		
7260	MOTOR VEHICLES			2,930.58			
	S&E/EQUIP/UTILITIES	12,290.44	2,907.23	27,162.30	16,512.99	14,220.71	
9900	SUPPORT TO CURR	1,500.00	-	-	2,500.00		
9901	SUPPORT FROM CUR	(9,750.36)		(2,500.00)		(125.00)	
	TRANSFERS TO/FROM	(8,250.36)		(2,500.00)	2,500.00	(125.00)	
	TOTAL EXP. & TRANSF	13,924.25	11,927.99	34,407.92	28,150.45	14,095.71	14,264.87
% of TOTAL EXP. & TRANSF/Revenue		**20%**	**18%**	**49%**	**37%**	**17%**	**24%**
EVENUE LESS EXP.		**(10,954.63)**	**(10,477.62)**	**11,769.65**	**1,993.50**	**(11,668.77)**	**(9,748.52)**

($9,750.36) sale of equipment	($8,515.87) in from last year	$2,930.58	Motor Vehicles
		$10,120.00	Computers
$9,884.17	$9,020.76	$9,745.62	Salaries

AUTOBODY

4-15132 SL Account Summary by Code - Comparison

ect Code	Description	2001 / 2002	2000 / 2001 Actual	1999 / 2000 Actual	1998 / 1999 Actual	1997 / 1998 Actual	1996 / 1997 Actual
92	GIFTS - NRG'S				(9,178.00)		
540	MISC. SALES-NO T	(6,293.50)	(7,691.25)	(7,573.10)	(13,417.30)	(6,075.81)	(6,405.36)
545	MISC. SALES-TAXA	(9,754.17)	(12,924.89)	(10,927.67)	(22,011.03)	(23,558.16)	(16,436.77)
660	Invalid Object Code		-	(110.73)			
661	SLS-SAFETY KLEEN					(10.00)	(402.00)
662	SLS-SUPPLY & MAT	(713.06)	(1,192.40)	(756.68)	(1,192.11)	(1,190.34)	(902.11)
663	SLS-PAINT	(1,938.85)	(3,529.41)	(1,556.05)	(3,630.39)	(1,422.14)	(2,917.66)
664	SLS-SUBLET	(16.00)			(90.00)		
666	SLS-UPS		(4.50)				
	REVENUES	(18,715.58)	(25,342.45)	(20,924.23)	(49,518.83)	(32,256.45)	(27,063.90)
999	MISC COST OF GOO	13,374.79	17,313.69	15,460.61	30,580.32	24,035.44	18,870.31
	COST OF GOODS SOLD	13,374.79	17,313.69	15,460.61	30,580.32	24,035.44	18,870.31
	NET REV(REV-COGS)	(5,340.79)	(8,028.76)	(5,463.62)	(18,938.51)	(8,221.01)	(8,193.59)
3000	MAT & SUPPLY BUD				-		
3005	BREAKAGE	787.03	993.67	809.78			
3015	Auto Paint	4,377.97	3,388.17	2,728.42			
3125	Breakage		-	50.24	2,502.30	1,206.92	1,193.87
3225	Copy cost		-	0.75			
3325	EDUC/RECREATIONA	407.47	-	779.81	1,912.17	1,361.49	1,553.68
3330	EDUCATIONAL SUPPORT		-			197.73	
3450	FREIGHT		-				113.80
3500	GAS AND OIL	419.35	638.54	712.80	454.96	557.87	439.38
3525	General Maintenance	315.95	201.97	1,074.67	551.75	69.80	12.88
3550	LAB SUPPLIES	3.04	774.88	454.49	735.38	688.99	12.72
3675	Misc Supply & Expenses	557.83	1,877.47	653.40			
3700	MISC. SUPPLIES				833.70	844.65	1,155.29
3725	OFFICE SUPPLIES						
3750	PEST CONTROL (paint)				5,228.36	2,365.18	2,291.09
3999	EQUIPMENT UNDER						1,552.33
5300	INSURANCE PREMIU	356.85	-	198.11	359.03	205.29	726.00
5800	TELEPHONE EQUIPM	631.29	688.68	714.38	688.68	688.68	688.68
5802	TELEPHONE - WATS	320.90	290.86	275.35	203.69	189.17	216.83
6650	MAINT/REP-EQUIPM		-	70.75	211.57		221.24
6750	M&R Motor Vehicle	55.94	-	60.08			
	SUPPLY & EXPENSE	8,936.62	8,854.24	8,583.03	13,681.59	8,375.77	10,177.79
7000	EQUIPMENT BUDGET				-		
7100	CLASSROOM EQUIPM				9,178.00		
	EQUIPMENT				-		
	S&E/EQUIP/UTILITIES	8,936.62	8,854.24	8,583.03	22,859.59	8,375.77	10,177.79
9900	SUPPORT TO CURR				-		
9901	SUPPORT FROM CUR						
	TRANSFERS TO/FROM				-		
	TOTAL EXP. & TRANSF	8,936.62	8,854.24	8,583.03	22,859.59	8,375.77	10,177.79
REVENUE LESS EXP.		**3,595.83**	**825.48**	**3,119.41**	**3,921.08**	**154.76**	**1,984.20**

Paint Supply +/-	(2,439.12)	141.24	(1,172.37)
Supply cost loss	155.23	(685.07)	(828.07)
		(543.83)	(2,000.44)

DATE	NAME	RO #	CHECK'S REC'D	CREDIT CARD	CASH PER B.O.	S&E ACCT.	DE...	PARTS COST	Total Parts	PARTS TAX	SUPPLY	PHONE	EQUIPMENT USE	TAX	UPS	SER. FEE	Check
11/6/01	void	1538								0.00							0.00
11/7/01	void	1560								0.00							0.00
11/12/01	void	1708								0.00							0.00
11/14/01	void	1726								0.00							0.00
11/2/01	Pearson, Robert	1661			36.26			$17.02	$29.49	28.09	$1.40			$1.77		$5.00	36.26
11/2/01	Johnson, Eric	1671			5.00					0.00						$5.00	5.00
11/5/01	Marzec, Jessica	1674			10.00					0.00			$5.00			$5.00	10.00
11/7/01	Vogley, Amber	1632			128.73			$80.72	$116.73	111.17	$5.56			$7.00		$5.00	128.73
11/7/01	Murray, sidel	1673			175.97			$96.21	$143.37	136.54	$6.83		$19.00	$8.60		$5.00	175.97
11/9/01	Scheerer, bob	1691			5.00					0.00						$5.00	5.00
11/9/01	Hall, Raymond	1712			16.63			$7.08	$10.97	10.45	$0.52			$0.66		$5.00	16.63
11/16/01	Warren, Doug	1654			20.22			$0.10	$0.21	0.20	$0.01		$15.00	$0.01		$5.00	20.22
11/16/01	Siegner, Ken	1715			42.35			$20.11	$35.24	33.56	$1.68			$2.11		$5.00	42.35
11/20/01	Vogley, Amber	1743			0.00					0.00							0.00
11/5/01	Hancock, don	1537	$552.00					$302.82	$516.04	491.47	$24.57			$30.96		$5.00	552.00
11/5/01	Hoerter, Jim	1528	$913.26					$487.32	$840.81	800.77	$40.04		$17.00	$50.45		$5.00	913.26
11/5/01	Jasurda, Joe	1668	$10.00							0.00			$5.00			$5.00	10.00
11/5/01	Jacops, Bruce	1663	$183.69					$101.92	$168.58	160.55	$8.03			$10.11		$5.00	183.69
11/5/01	Hurless, Lela	1602	390.91					$186.87	$357.46	350.46	$7.00		$7.00	$21.45		$5.00	390.91
11/5/01	Scott, Nancy	1555	45.39					$26.55	$38.10	38.10				$2.29		$5.00	45.39
11/5/01	Scott, Jacob	1592	5.00							0.00						$5.00	5.00
11/5/01	Scott, James	1524	5.00							0.00						$5.00	5.00
11/5/01	Siegert, Natasha	1645	41.65					$18.95	$34.58	32.93	$1.65			$2.07		$5.00	41.65
11/5/01	Metcalf, Sharon	1665	15.00							0.00			$10.00	$0.00		$5.00	15.00
11/5/01	Buckingham, Kim	1655	5.00							0.00						$5.00	5.00
11/5/01	Bittner, Dan	1641	10.00							0.00			$5.00			$5.00	10.00
11/5/01	Warren, Cody	1653	5.00							0.00						$5.00	5.00
11/5/01	Bania, Keith	1659	16.50					$6.07	$10.85	10.33	$0.52			$0.65		$5.00	16.50
11/5/01	Koole, Brian	1657	178.79					$111.35	$157.35	157.35			$7.00	$9.44		$5.00	178.79
11/5/01	Pitts, Terry	1442	184.91					$103.13	$165.01	160.01	$5.00		$5.00	$9.90		$5.00	184.91
11/5/01	Metcalf, Sharon	1670		203.64				$102.03	$187.40	178.48	$8.92			$11.24		$5.00	203.64
11/5/01	Adams, Tom	1650		13.31				$1.68	$3.20	3.05	$0.15		$5.00	$0.11		$5.00	13.31
11/5/01	Urbanowicz, Matt	1672		10.00						0.00			$5.00			$5.00	10.00
11/8/01	Grothe, Tod	1633	298.85					$191.80	$274.39	261.32	$13.07		$3.00	$16.46		$5.00	298.85
11/8/01	Hancock, don	1693	10.77					$2.66	$5.44	5.18	$0.26			$0.33		$5.00	10.77
11/8/01	Fowler, Vic	1445	6.99					$1.19	$1.88	1.79	$0.09			$0.11		$5.00	6.99
11/8/01	Fowler, Vic	1683	79.17					$49.98	$69.97	66.64	$3.33			$4.20		$5.00	79.17
11/8/01	King, Harry	1618	404.97					$249.50	$367.90	350.38	$17.52		$10.00	$22.07		$5.00	404.97
11/8/01	Metcalf, Sharon	1689	10.32					$0.17	$0.30	0.29	$0.01		$5.00	$0.02		$5.00	10.32
11/8/01	Arthur, Ryan	1662	286.64					$146.14	$263.81	251.25	$12.56		$2.00	$15.83		$5.00	286.64
11/8/01	sherwood, Art	1563	506.06					$256.56	$446.28	425.03	$21.25		$23.00	$26.78		$10.00	506.06
11/8/01	Rogghe, Craig	1504		5.00						0.00						$5.00	5.00
11/8/01	Radford, Kathy	1667		178.15				$91.19	$161.46	153.77	$7.69		$2.00	$9.69		$5.00	178.15
11/8/01	Calhoun, Scott	1680		5.00						0.00						$5.00	5.00
11/8/01	Bennett, Jennifer	1586		811.34				$534.31	$758.81	722.68	$36.13		$2.00	$45.53		$5.00	811.34

	DATE	NAME	RO #	CHECK'S REC'D	CREDIT CARD	CASH PER B.O.	S&E ACCT.	DE INC.	PARTS COST	Total Parts	PARTS TAX	SUPPLY	PHONE	EQUIPMENT USE	TAX	UPS	SE: EE	Check
	11/8/01	Seeger, Tim	1684		6.48				$0.78	$1.40	1.33	$0.07			$0.08		$5.00	6.4
	11/8/01	Bozinowski, Sarah	1690		5.00						0.00						$5.00	5.0
5131-3005	11/7/01	Mccallahan, Anthony	1189				2.26		$2.26		0.00						$2.26	2.2
	11/20/01	Simpkins, Renisha	1741		0.00						0.00							0.0
	11/21/01	Lanivich, Tim	1733			6.11			$0.60	$1.05	1.00	$0.05			$0.06		$5.00	6.11
	11/21/01	Chambers, Tyler	1740			5.00			$0.00		0.00						$5.00	5.00
	11/13/01	Edwards, Donald	1656	918.36					$409.94	$855.06	814.34	$40.72		$7.00	$51.30		$5.00	918.36
	11/13/01	Siegert, Natasha	1666	37.68					$21.79	$30.83	29.36	$1.47			$1.85		$5.00	37.68
	11/13/01	Ntloyathuto, Nonofo	1644	474.75					$241.60	$432.78	412.17	$20.61		$11.00	$25.97		$5.00	474.75
	11/13/01	Kennedy, Amanda	1603	850.00		116.86			$623.09	$896.09	853.42	$42.67		$12.00	$53.77		$5.00	966.86
	11/13/01	Embry, Ryan	1675		147.86				$68.17	$134.77	128.35	$6.42			$8.09		$5.00	147.86
	11/13/01	Simpkins, Renisha	1676		290.66				$130.37	$255.34	243.18	$12.16		$15.00	$15.32		$5.00	290.66
	11/13/01	Stauss, Ryan	1700		35.28				$17.58	$28.57	27.21	$1.36			$1.71		$5.00	35.28
	11/13/01	Pline, Jeremy	1681		64.35				$29.81	$55.99	53.32	$2.67			$3.36		$5.00	64.35
	11/13/01	Lee, Aaron	1697		5.00						0.00						$5.00	5.00
	11/13/01	Adams, Tom	1695		100.50				$66.00	$90.09	85.80	$4.29			$5.41		$5.00	100.50
	11/13/01	Shewan, Gregg	1694		395.24				$261.54	$368.15	350.62	$17.53			$22.09		$5.00	395.24
	11/13/01	Carter, Tamika	1687		14.48				$7.72	$9.28	8.84	$0.44			$0.20		$5.00	14.48
	11/28/01	Warren, Doug	1738			9.76			$2.56	$4.49	4.28	$0.21			$0.27		$5.00	9.76
	11/27/01	Kaelo, Kelebantswe	1758			0.00					0.00							0.00
	11/28/01	King, annie	1590			0.00					0.00							0.00
	1128/01	Kwant, Clare VOID	1582			0.00					0.00							0.00
	11/21/01	Ropele, Mike	1713	8.68					$1.95	$3.47	3.30	$0.17			$0.21		$5.00	8.68
	11/21/01	Neiderheide, Ron	1717	5.53					$0.24	$0.50	0.48	$0.02			$0.03		$5.00	5.53
	11/21/01	Walker, Tina	1705	48.35					$23.61	$39.01	37.15	$1.86		$2.00	$2.34		$5.00	48.35
	11/21/01	Hancock, don	1718	11.72					$4.52	$6.34	6.04	$0.30			$0.38		$5.00	11.72
	11/21/01	Carr, Nick	1732	19.30					$8.55	$13.49	12.85	$0.64			$0.81		$5.00	19.30
	11/21/01	Donahue, Bill	1711	10.00							0.00			$5.00			$5.00	10.00
	11/21/01	Hull, L	1720	114.78					$57.06	$103.55	98.62	$4.93			$6.21		$5.02	114.78
	11/21/01	Jacobs, Tim	1710	293.37					$113.95	$267.33	254.60	$12.73		$5.00	$16.04		$5.00	293.37
	11/21/01	Hyde, Sara	1701	14.29					$6.44	$8.76	8.34	$0.42			$0.53		$5.00	14.29
	11/21/01	Sczepaniak, Damian	1630		226.93				$137.36	$201.82	192.21	$9.61		$8.00	$12.11		$5.00	226.93
	11/21/01	Turnquist, Michael	1682		250.29				$105.70	$221.97	211.40	$10.57		$10.00	$13.32		$5.00	250.29
	11/21/01	Sterly, Ryan	1727		5.00						0.00						$5.00	5.00
	11/21/01	Jesen, Michael	1685		388.04				$244.88	$351.92	335.16	$16.76		$10.00	$21.12		$5.00	388.04
	11/21/01	Garrison, Mark	1716		58.05				$38.50	$54.76	52.15	$2.61			$3.29		$0.00	58.05
	11/21/01	Skurski, Dan	1647		64.84				$49.29	$61.17	58.26	$2.91			$3.67		$0.00	64.84
	11/21/01	Berry, Erin	1703		5.34				$0.15	$0.32	0.30	$0.02			$0.02		$5.00	5.34
	11/21/01	Shaw, Herb	1734		5.00						0.00						$5.00	5.00
	11/21/01	Veddler, Tara	1736		10.00						0.00			$5.00			$5.00	10.00
	11/21/01	Deboer, Ruth	1735		82.14				$37.80	$72.77	69.30	$3.47			$4.37		$5.00	82.14
	12/7/01	void	1688								0.00							0.00
	12/4/01	void	1796								0.00							0.00
	12/7/01	void	1752								0.00							0.00
	12/7/01	void	1707								0.00							0.00
	12/7/01	void	1686								0.00							0.00
	12/7/01	void	1669								0.00							0.00

	DATE	NAME	RO #	CHECK'S REC'D	CREDIT CARD	CASH PER B.O.	S&E ACCT.	DE INC.	PARTS COST	Total Parts	PARTS TAX	SUPPLY	PHONE	EQUIPMENT USE	TAX	UPS	SER. CE	Check
	12/3/01	void	1788								0.00							0.00
	11/30/01	Jasurda, Joe	1779		0.00						0.00							0.00
	11/30/01	Newton, Rich	1696			514.55			$327.12	$480.71	457.82	$22.89			$28.84		$5.00	514.55
	11/30/01	Vanover, Dean	1723			177.29			$90.81	$162.54	154.80	$7.74			$9.75		$5.00	177.29
	11/30/01	M-66 Auto		13.75							0.00						$13.75	13.75
	11/30/01	Reinik, Ken	1571	40.89					$17.83	$25.37	24.16	$1.21		$9.00	$1.52		$5.00	40.89
	11/30/01	Reinik, Ken	1637	16.80					$8.40	$11.13	10.60	$0.53		$5.00	$0.67		$0.00	16.80
	11/30/01	Bonning, Chuck	1511	5.00							0.00						$5.00	5.00
	11/30/01	Bonning, Bill	1475	26.67					$13.72	$20.44	19.47	$0.97			$1.23		$5.00	26.67
	11/30/01	Bonning, Bill	1601	7.04					$1.22	$1.92	1.83	$0.09			$0.12		$5.00	7.04
	11/30/01	Bonning, Bill	1523	47.34					$25.22	$36.17	34.45	$1.72		$4.00	$2.17		$5.00	47.34
	11/30/01	videtich, Greg	1759	10.80					$5.80	$5.80	5.80						$5.00	10.80
	11/30/01	Mcleod, Ryan	1729	374.15					$270.31	$348.25	331.67	$16.58			$20.90		$5.00	374.15
	11/30/01	Alley, Ryan	1719	408.73					$181.38	$380.88	362.74	$18.14			$22.85		$5.00	408.73
	11/30/01	Arndt, Chris	1737	33.08					$16.34	$21.77	20.73	$1.04		$5.00	$1.31		$5.00	33.08
	11/30/01	King, Harry	1731	193.26					$95.60	$177.60	169.14	$8.46			$10.66		$5.00	193.26
	11/30/01	Gilkerson, Harold	1730	153.59					$98.38	$140.18	133.50	$6.68			$8.41		$5.00	153.59
	11/30/01	Hillary, Bill	1699		122.76				$76.05	$104.29	99.32	$4.97		$8.00	$5.47		$5.00	122.76
	11/30/01	Raymond, Chris	1728		116.16				$72.33	$102.98	98.08	$4.90		$2.00	$6.18		$5.00	116.16
	11/30/01	Russell, Brent	1751		5.00						0.00						$5.00	5.00
	11/30/01	Murray, Sidel	1709		142.02				$68.82	$129.26	123.10	$6.16			$7.76		$5.00	142.02
	11/30/01	Bozinowski, Sarah	1745		76.08				$47.47	$67.06	63.87	$3.19			$4.02		$5.00	76.08
	11/30/01	Kaminski, Adam	1768		6.51				$0.68	$1.42	1.35	$0.07			$0.09		$5.00	6.51
155-3325	11/30/01	FSU AB Training Supplie	1766				9.30		$9.30		0.00						$9.30	9.30
175-3325	11/30/01	FSU Lab Supplies	1744				119.99		$119.99		0.00						$119.99	119.99
175-6750	11/30/01	FSU Viper	1742				89.25		$89.25		0.00						$89.25	89.25
175-6750	11/30/01	FSU 93 Sable	1722				29.79		$29.79		0.00						$29.79	29.79
175-6750	11/30/01	FSU Voyager LE	1770				7.42		$7.42		0.00						$7.42	7.42
131-3999	11/30/01	FSU engine stand	1433				483.16		$483.16		0.00						$483.16	483.16
131-6750	11/30/01	Parts Truck	1777				22.80		$22.80		0.00						$22.80	22.80
131-3675	11/30/01	FSU AT200-250	1746				197.61		$197.61		0.00						$197.61	197.61
131-3525	11/30/01	FSU AS Equip repair	1747				20.55		$20.55		0.00						$20.55	20.55
131-3005	11/30/01	FSU AS Breakage	1714				151.29		$151.29		0.00						$151.29	151.29
	11/30/01	void	1507				0.00				0.00							0.00
											0.00							0.00
											0.00							0.00
				8303.78	3855.45	1269.73	1133.42	0.00	8455.88		11407.65	546.82	0.00	275.00	715.72	0.00	1617.19	14562.38

FSU Auto Service
708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01442	11/05/2001	35.3	59.02	Cost	103.13	0.00	5.00	0.00	0.00	108.13
Pitts, Terry				Sale	157.15	5.00	5.00			167.15
)01445	11/08/2001	82.5	5.60	Cost	1.19	0.00	0.00	0.00	0.00	1.19
Fowler, Vic				Sale	1.79	5.00	0.00			6.79
)01475	11/28/2001	43.9	10.75	Cost	13.72	0.00	0.00	0.00	0.00	13.72
Bonning, Bill				Sale	19.47	5.00	0.00			24.47
)01478	11/21/2001	36.2	112.70	Cost	182.85	0.00	16.00	0.00	0.00	198.85
Smith, Donna				Sale	290.55	5.00	16.00			311.55
)01504	11/08/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Craig, Roggle				Sale	0.00	5.00	0.00			5.00
001511	11/28/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
nning, Chuck				Sale	0.00	5.00	0.00			5.00
:523	11/28/2001	32.8		Cost	25.22	0.00	4.00	0.00	0.00	29.22
Bonning, Chuck				Sale	34.45	5.00	4.00			43.45
001524	11/05/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
cott, james				Sale	0.00	5.00	0.00			5.00
001528	11/05/2001	38.7	318.45	Cost	487.32	0.00	17.00	0.00	0.00	504.32
Hoerter, Jim				Sale	800.77	5.00	17.00			822.77
001537	11/05/2001	39.0	193.65	Cost	302.82	0.00	0.00	0.00	0.00	302.82
hancock, don				Sale	491.47	5.00	0.00			496.47
)01543	11/19/2001	0.0	0.00	Cost	3.02	0.00	0.00	0.00	0.00	3.02
FSU Car,				Sale	3.02	0.00	0.00			3.02
)01555	11/05/2001	35.7	14.74	Cost	26.55	0.00	0.00	0.00	0.00	26.55
scott, nancy				Sale	36.29	5.00	0.00			41.29
)01560	11/07/2001	0.0	0.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Winchester, Stacy				Sale	0.00	0.00	0.00			0.00
)01563	11/08/2001	39.0	178.47	Cost	256.56	0.00	23.00	0.00	0.00	279.56
sherwood, art				Sale	425.03	10.00	23.00			458.03
571	11/28/2001	29.7	11.33	Cost	17.83	0.00	9.00	0.00	0.00	26.83
nink, ken				Sale	24.16	5.00	9.00			38.16

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01586	11/08/2001	26.5	193.37	Cost	534.31	0.00	2.00	0.00	0.00	536.31
Bennett , Jennifer				Sale	722.68	5.00	2.00			729.68
)01590	11/28/2001	0.0	0.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
king, annie				Sale	0.00	0.00	0.00			0.00
)01592	11/05/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Scott, Jacob				Sale	0.00	5.00	0.00			5.00
)01601	11/28/2001	82.1	5.61	Cost	1.22	0.00	0.00	0.00	0.00	1.22
Bonning, Bill				Sale	1.83	5.00	0.00			6.83
)01602	11/05/2001	45.0	158.57	Cost	186.87	0.00	7.00	0.00	0.00	193.87
urless, Lela				Sale	340.44	5.00	7.00			352.44
001603	11/27/2001	27.0	235.33	Cost	623.09	0.00	12.00	0.00	0.00	635.09
nnedy, Amanda				Sale	853.42	5.00	12.00			870.42
'64	?301	0.0	0.00	Cost	160.04	0.00	0.00	0.00	0.00	160.04
effs Van,				Sale	160.04	0.00	0.00			160.04
001616	11/05/2001	45.5	5.00	Cost	0.00	0.00	6.00	0.00	0.00	6.00
nyang, charles				Sale	0.00	5.00	6.00			11.00
)01618	11/08/2001	29.0	105.88	Cost	249.50	0.00	10.00	0.00	0.00	259.50
King, Harry				Sale	350.38	5.00	10.00			365.38
)01621	11/19/2001	0.0	0.00	Cost	186.97	0.00	0.00	0.00	0.00	186.97
FSU AS AT 200/250				Sale	186.97	0.00	0.00			186.97
)01622	11/19/2001	13.0	6.85	Cost	45.72	0.00	0.00	0.00	0.00	45.72
FSU AS Equipment Repair				Sale	52.57	0.00	0.00			52.57
)01624	11/19/2001	0.0	0.00	Cost	280.43	0.00	0.00	0.00	0.00	280.43
FSU LAB SUPPLIES (ALL)				Sale	280.43	0.00	0.00			280.43
)01626	11/19/2001	0.0	0.00	Cost	487.92	0.00	0.00	0.00	0.00	487.92
FSU AB Training Supplies				Sale	487.92	0.00	0.00			487.92
)01628	11/05/2001	28.7	64.82	Cost	153.68	0.00	7.00	0.00	0.00	160.68
Kuiter, Kurt				Sale	213.50	5.00	7.00			225.50
630	11/21/2001	29.2	59.85	Cost	137.36	0.00	8.00	0.00	0.00	145.36
zepaniak, Damien				Sale	192.21	5.00	8.00			205.21

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01632	11/20/2001	30.5	35.45	Cost	80.72	0.00	0.00	0.00	0.00	80.72
Vogley, Amber				Sale	111.17	5.00	0.00			116.17
)01633	11/08/2001	27.7	74.52	Cost	191.80	0.00	3.00	0.00	0.00	194.80
Grothe, Tod				Sale	261.32	5.00	3.00			269.32
)01637	11/28/2001	14.1	2.20	Cost	8.40	0.00	5.00	0.00	0.00	13.40
reinink, ken				Sale	10.60	0.00	5.00			15.60
)01641	11/05/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
Bittner, Dan				Sale	0.00	5.00	5.00			10.00
)01642	11/05/2001	33.6	18.10	Cost	35.79	0.00	0.00	0.00	0.00	35.79
ones, Catrina				Sale	48.89	5.00	0.00			53.89
001644	11/12/2001	41.0	175.57	Cost	241.60	0.00	11.00	0.00	0.00	252.60
loyathuto, Nonofo				Sale	412.17	5.00	11.00			428.17
1645	11/05/2001	50.0	18.98	Cost	18.95	0.00	0.00	0.	. 0	18.95
Siegert, Natasha				Sale	32.93	5.00	0.00			37.93
001646	11/19/2001	0.0	0.00	Cost	40.00	0.00	0.00	0.00	0.00	40.00
FSU Veh Recruiting Truck				Sale	40.00	0.00	0.00			40.00
001647	11/21/2001	15.4	8.97	Cost	49.29	0.00	0.00	0.00	0.00	49.29
Skurski, Dan				Sale	58.26	0.00	0.00			58.26
)01650	11/05/2001	48.8	6.37	Cost	1.68	0.00	5.00	0.00	0.00	6.68
Adams, Tom				Sale	3.05	5.00	5.00			13.05
)01653	11/05/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Warren, Cody				Sale	0.00	5.00	0.00			5.00
)01654	11/20/2001	25.2	5.10	Cost	0.10	0.00	15.00	0.00	0.00	15.10
Warren, Doug				Sale	0.20	5.00	15.00			20.20
)01655	11/05/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Buckingham, Kim				Sale	0.00	5.00	0.00			5.00
)01656	11/12/2001	49.5	409.40	Cost	409.94	0.00	7.00	0.00	0.00	416.94
dwards, donald				Sale	814.34	5.00	7.00			826.34
657	11/05/2001	26.9	43.51	Cost	111.35	0.00	7.00	0.00	0.00	118.35
ole, Brian				Sale	149.86	5.00	7.00			161.86

FSU Auto Service
708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01659	11/05/2001	60.4	9.26	Cost	6.07	0.00	0.00	0.00	0.00	6.07
Bania, Keith				Sale	10.33	5.00	0.00			15.33
)01660	11/21/2001	63.3	113.93	Cost	66.00	0.00	0.00	0.00	0.00	66.00
Mitchell, Jarrad				Sale	169.93	10.00	0.00			179.93
)01661	11/20/2001	48.6	16.07	Cost	17.02	0.00	0.00	0.00	0.00	17.02
Pearson, Robert				Sale	28.09	5.00	0.00			33.09
)01662	11/08/2001	42.6	110.11	Cost	146.14	0.00	2.00	0.00	0.00	148.14
Arthur, Ryan				Sale	251.25	5.00	2.00			258.25
001663	11/05/2001	38.4	63.63	Cost	101.92	0.00	0.00	0.00	0.00	101.92
acobs, Bruce				Sale	160.55	5.00	0.00			165.55
001664	11/19/2001	0.0	0.00	Cost	311.36	0.00	0.00	0.00	0.00	311.36
SU AS Breakage				Sale	311.36	0.00	0.00			311.36
665	11/05/2001	33.3	5.00	Cost	0.00	[illegible]	10.00	0.00	0.00	10.00
Metcalf, Sharon				Sale	0.00	5.00	10.00			15.00
001666	11/12/2001	36.6	12.57	Cost	21.79	0.00	0.00	0.00	0.00	21.79
Siegert, Natasha				Sale	29.36	5.00	0.00			34.36
001667	11/08/2001	42.0	67.58	Cost	91.19	0.00	2.00	0.00	0.00	93.19
Radford, Kathy				Sale	153.77	5.00	2.00			160.77
)01668	11/05/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
Jasurda, Joe				Sale	0.00	5.00	5.00			10.00
)01670	11/05/2001	44.4	81.45	Cost	102.03	0.00	0.00	0.00	0.00	102.03
metcalf, sharon				Sale	178.48	5.00	0.00			183.48
)01671	11/20/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
eric johnson,				Sale	0.00	5.00	0.00			5.00
)01672	11/05/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
rbanowicz, matt				Sale	0.00	5.00	5.00			10.00
001673	11/20/2001	28.2	45.33	Cost	96.21	0.00	19.00	0.00	0.00	115.21
Murray, Sidel				Sale	136.54	5.00	19.00			160.54
674	11/20/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
arzec, Jessica				Sale	0.00	5.00	5.00			10.00

smpft103

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
001675	11/12/2001	48.9	65.18	Cost	68.17	0.00	0.00	0.00	0.00	68.17
Embrey, Ryan				Sale	128.35	5.00	0.00			133.35
001676	11/12/2001	44.8	117.81	Cost	130.37	0.00	15.00	0.00	0.00	145.37
Simpkins, Renisha				Sale	243.18	5.00	15.00			263.18
001677	11/19/2001	0.0	0.00	Cost	42.26	0.00	0.00	0.00	0.00	42.26
FSU ER equip under $500				Sale	42.26	0.00	0.00			42.26
001680	11/08/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Carhoun, scott				Sale	0.00	5.00	0.00			5.00
001681	11/12/2001	48.9	28.51	Cost	29.81	0.00	0.00	0.00	0.00	29.81
Pline, Jeremy				Sale	53.32	5.00	0.00			58.32
001682	11/21/2001	48.9	110.70	Cost	105.70	0.00	10.00	0.00	0.00	115.70
rnquist, Michael,				Sale	211.40	5.00	10.00			226.40
683	11/08/2001	30.2	[illegible]	Cost	49.98	0.00	0.00	0.00	0.00	49.98
Fowler, Vic				Sale	66.64	5.00	0.00			71.64
001684	11/08/2001	87.7	5.55	Cost	0.78	0.00	0.00	0.00	0.00	0.78
Seeger, Tim				Sale	1.33	5.00	0.00			6.33
001685	11/21/2001	27.2	95.28	Cost	244.88	0.00	10.00	0.00	0.00	254.88
Jesen, Michael				Sale	335.16	5.00	10.00			350.16
001687	11/12/2001	44.2	6.12	Cost	7.72	0.00	0.00	0.00	0.00	7.72
Carter, Tamika				Sale	8.84	5.00	0.00			13.84
001689	11/08/2001	49.8	5.12	Cost	0.17	0.00	5.00	0.00	0.00	5.17
metcalf, sharon				Sale	0.29	5.00	5.00			10.29
001690	11/08/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
BOZINOWSKI, SARAH				Sale	0.00	5.00	0.00			5.00
001691	11/20/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Scheerer, Rob				Sale	0.00	5.00	0.00			5.00
001693	11/08/2001	73.9	7.52	Cost	2.66	0.00	0.00	0.00	0.00	2.66
hancock, don				Sale	5.18	5.00	0.00			10.18
694	11/12/2001	26.5	94.08	Cost	261.54	0.00	0.00	0.00	0.00	261.54
swan, gregg				Sale	350.62	5.00	0.00			355.62

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01695	11/12/2001	27.3	24.80	Cost	66.00	0.00	0.00	0.00	0.00	66.00
Adams, Tom				Sale	85.80	5.00	0.00			90.80
)01697	11/12/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
lee, aaron				Sale	0.00	5.00	0.00			5.00
)01699	11/28/2001	25.2	28.27	Cost	76.05	0.00	8.00	0.00	0.00	84.05
Hillary , Bill				Sale	99.32	5.00	8.00			112.32
)01700	11/12/2001	45.4	14.63	Cost	17.58	0.00	0.00	0.00	0.00	17.58
Stauss, Ryan				Sale	27.21	5.00	0.00			32.21
)01701	11/21/2001	51.7	6.90	Cost	6.44	0.00	0.00	0.00	0.00	6.44
Hyde, Sarah				Sale	8.34	5.00	0.00			13.34
001703	11/21/2001	97.2	5.15	Cost	0.15	0.00	0.00	0.00	0.00	0.15
·ry, eren				Sale	0.30	5.00	0.00			5.30
[illegible]	·1	42.0	18.54	Cost	23.61	0.00	2.00	0.00	0.00	25.61
Walker, Tina				Sale	37.15	5.00	2.00			44.15
001709	11/28/2001	46.3	59.28	Cost	68.82	0.00	0.00	0.00	0.00	68.82
Murray, Sidel				Sale	123.10	5.00	0.00			128.10
001710	11/21/2001	55.0	145.65	Cost	113.95	0.00	5.00	0.00	0.00	118.95
Jacobs Tim,				Sale	254.60	5.00	5.00			264.60
)01711	11/21/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
donahue, bill				Sale	0.00	5.00	5.00			10.00
)01712	11/20/2001	54.2	8.37	Cost	7.08	0.00	0.00	0.00	0.00	7.08
hall, raymond				Sale	10.45	5.00	0.00			15.45
)01713	11/21/2001	76.5	6.35	Cost	1.95	0.00	0.00	0.00	0.00	1.95
roepele, mike				Sale	3.30	5.00	0.00			8.30
)01715	11/20/2001	47.8	18.45	Cost	20.11	0.00	0.00	0.00	0.00	20.11
Siegner, ken				Sale	33.56	5.00	0.00			38.56
)01716	11/21/2001	26.2	13.65	Cost	38.50	0.00	0.00	0.00	0.00	38.50
garrison, mark				Sale	52.15	0.00	0.00			52.15
·'717	11/21/2001	95.6	5.24	Cost	0.24	0.00	0.00	0.00	0.00	0.24
ıderheide, Ron				Sale	0.48	5.00	0.00			5.48

smpft103

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)01718	11/21/2001	59.1	6.52	Cost	4.52	0.00	0.00	0.00	0.00	4.52
Hancock, Don				Sale	6.04	5.00	0.00			11.04
)01719	11/28/2001	50.7	186.36	Cost	181.38	0.00	0.00	0.00	0.00	181.38
Alley, Ryan				Sale	362.74	5.00	0.00			367.74
)01720	11/21/2001	44.9	46.56	Cost	57.06	0.00	0.00	0.00	0.00	57.06
Hull, L				Sale	98.62	5.00	0.00			103.62
)01722	11/27/2001	16.8	5.00	Cost	24.79	0.00	0.00	0.00	0.00	24.79
FSU Veh 93 Sable				Sale	24.79	5.00	0.00			29.79
)01727	11/21/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
sterly, ryan				Sale	0.00	5.00	0.00			5.00
001728	11/28/2001	29.3	30.75	Cost	72.33	0.00	2.00	0.00	0.00	74.33
Raymond, Chris				Sale	98.08	5.00	2.00			105.08
1729	11/28/2001	19.7	66.36	Cost	270.31	0.00	0.00	0.00	0.00	270.31
Mcleod, Ryan				Sale	331.67	5.00	0.00			336.67
001730	11/28/2001	29.0	40.12	Cost	98.38	0.00	0.00	0.00	0.00	98.38
gilkerson, Harold				Sale	133.50	5.00	0.00			138.50
001731	11/28/2001	45.1	78.54	Cost	95.60	0.00	0.00	0.00	0.00	95.60
King, Harry				Sale	169.14	5.00	0.00			174.14
)01732	11/21/2001	52.1	9.30	Cost	8.55	0.00	0.00	0.00	0.00	8.55
carr, nick				Sale	12.85	5.00	0.00			17.85
)01733	11/27/2001	90.0	5.40	Cost	0.60	0.00	0.00	0.00	0.00	0.60
lanivich, tim				Sale	1.00	5.00	0.00			6.00
)01734	11/21/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Shaw, Herb				Sale	0.00	5.00	0.00			5.00
)01735	11/21/2001	49.1	36.50	Cost	37.80	0.00	0.00	0.00	0.00	37.80
deboer, ruth				Sale	69.30	5.00	0.00			74.30
001736	11/21/2001	50.0	5.00	Cost	0.00	0.00	5.00	0.00	0.00	5.00
romautobody, tara				Sale	0.00	5.00	5.00			10.00
01737	11/28/2001	30.6	9.39	Cost	16.34	0.00	5.00	0.00	0.00	21.34
dt, Chris				Sale	20.73	5.00	5.00			30.73

FSU Auto Service

708 Campus Drive
Big Rapids, MI. 49307
Phone - 231-591-5989 Fax - 231-591-5982

Invoice Profit Summary Report

From: 11/01/2001 To: 11/30/2001 Report Date : 08/02/2002

Invoice No. / Customer	Date	Profit Percent	Profit $ Amount		Parts	Labor	Sublet	Overhead	Misc.	Totals
)1738	11/30/2001	72.4	6.72	Cost	2.56	0.00	0.00	0.00	0.00	2.56
Warren, Doug				Sale	4.28	5.00	0.00			9.28
)1740	11/27/2001	100.0	5.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Chambers, Tyler				Sale	0.00	5.00	0.00			5.00
)1741	11/27/2001	0.0	0.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
Simpkins, Renisha				Sale	0.00	0.00	0.00			0.00
)1742	11/27/2001	0.0	0.00	Cost	89.25	0.00	0.00	0.00	0.00	89.25
SU Viper,				Sale	89.25	0.00	0.00			89.25
001743	11/20/2001	0.0	0.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
ogley, Amber				Sale	0.00	0.00	0.00			0.00
001745	11/28/2001	31.1	21.40	Cost	47.47	0.00	0.00	0.00	0.00	47.47
OZINOWSKI, SARAH				Sale	63.87	5.00	0.00			68.87
/51	11/28/2001	100.0	5.00	Cost	0.00		0.00	0.00	0.00	0.00
ussel, Brent				Sale	0.00	5.00	0.00			5.00
001758	11/30/2001	0.0	0.00	Cost	0.00	0.00	0.00	0.00	0.00	0.00
aelo, Kelebantswe				Sale	0.00	0.00	0.00			0.00
01759	11/28/2001	46.3	5.00	Cost	5.80	0.00	0.00	0.00	0.00	5.80
Videtich, Greg				Sale	5.80	5.00	0.00			10.80
)1768	11/28/2001	89.3	5.67	Cost	0.68	0.00	0.00	0.00	0.00	0.68
Kaminski, Adam				Sale	1.35	5.00	0.00			6.35
Grand Totals:		**33.3**	**$4,654.72**	Cost	**$9,014.61**	**$0.00**	**$304.00**	**$0.00**	**$0.00**	**$9,318.61**
115 Invoices				Sale	**$13,174.33**	**$495.00**	**$304.00**			**$13,973.33**

AUTOMOTIVE SERVICE TECHNICIAN

Survey Results Spring 2002

Description: Students in the current automotive service program receive a comprehensive study of all ASE automobile and light truck service areas, and develop the necessary related diagnosing and servicing skills. With the completion of general education requirements, a two-year A.A.S. degree is awarded. Graduates are prepared to enter the automotive service industry or may continue their education and earn a B.S. degree in FSU offerings such as Automotive and Heavy Equipment Management and Automotive Engineering Technology.

1. What types of service facility do you own/operate?

   83% (15/18) of our employers either own or operate a dealer ship and the other 17% (3/18) includes Manufactures, Training Centers, and Automobile Manufactures.

2. Have you hired any of our two-year graduates in past years?

   84% (16/19) of the employers have hired our two-year graduate and 16% (3/19) have never hired one of our graduates in the past.

3. Are you satisfied with the comprehensive technical level of the current program format and the "Curriculum Guide Sheet"?

   95% (18/19) are very satisfied with our current curriculum and feel that students are acquiring a strong grasp on the automotive field. 5% (1/19) feel that the program could use improvements on certain subject matters.

4. Are you interested in continuing to hire these graduates in the future?

   100% are interested in hiring students from our Automotive Service Technology Program.

5. How many graduates might you hire per year?

   88% of the employers stated that they would hire 1 to 2 students per year, while 6% stated they will hirer 5 or more. Another 6% will not hire any of our students for employment.

6. What type of work would they perform?

   - Line Tech Auto Repair
   - General Technician Repair
   - GM Certification Facilitation
   - Automotive Electronics and Driveability
   - Light Electrical, Brakes, and Maintenance
   - Truck Repair
   - Customer Relations
   - Service District Manager
   -

7. What Technical courses do you consider essential?

   A percent of employers feel graduates should have these classes prior to employment.

59%	Manual Transmission & Drivelines	76%	Automatic Transmissions
94%	Brake Systems	88%	Suspension, Steering, Alignment
100%	Automotive Electronics	94%	Engine Electrical
100%	Chassis Electrical	12%	IM 240
76%	Automotive Engines	71%	Electronic Fuel MGMT System
76%	Automotive HVAC	1%	Others – Diagnosis

8. What general education courses do you consider essential?

82%	English	5%	History
59%	Speech	65%	Technical Writing
82%	Math	5%	Other (specify): Safety
41%	Physics	8%	Psychology
89%	Computer Literacy		

9. What would be the approximate yearly starting wage?

   According to the surveys we received back from employers, the forecasted income for our technicians will range from $15,000 to $30,000 annually.

   22% stated that Technicians started out at $15,000 to $20,000
   39% stated that Technicians started out at $21,000 to $25,000
   28% stated that Technicians started out at $26,000 to $30,000
   11% stated that Technicians started out over $30,000

10. What growth potential do you foresee for these graduates?

Employers had the following statements about the growth potential for future graduates in the automotive department.

- Extensive, high demand for the best little demand for uneducated techs.
- Master Tech/Shop Forman/Service Manager
- Growth potential looks good, if they apply themselves and have a good work ethic and attitude.
- Instructor level, Mid-Management, Eventually...Service Department Manager
- $18,700 guaranteed to start with a commission potential of $43,680.
- $30,000 to $80,000 Average: $50,000
- 10-15% yearly based on knowledge growth
- The sky is the limit, up to student and qualifications.
- Massive growth, many people are leaving this industry and we need replacements.
- Advancement is based on ability and performance.

11. What would you predict to be the earning level after 5 years?

100% (16/16) of the employers surveyed stated that tech will be making over $30,000 within the first five years.

12. How many of these graduates do you believe are necessary to fill the void in the market place?

- Lack of technicians
- Country wide 100,000 future economy may have all ready lowered this number.
- 60,000 nation wide
- In dealerships
- 75%
- As many as you can graduate.
- 7500 yearly nation wide

13. Do you consider ASE certification necessary?

6% feel that ASE certification is unnecessary.

44% feel that technicians should have their ASE certifications before apply for a job and getting employed. Some places of employment require certification to be considered for employment, such places as General Motors.

50% feel that certification could or should be obtained after hiring.

April 9, 2002

Dear Automotive Service Industry Employer:

Ferris State University endeavors to provide you with the highest quality automotive service graduates. To be able to meet your present and future needs, we are reviewing the structure of the automotive service program and its curriculum.

Your assistance and input is essential to the review of the Automotive Service Technology program. To help us identify your needs and preferences, please complete ONLY those portions of the survey that are applicable to you as described below.

Your time and effort is appreciated and is important to this process. If you have any questions, please call Greg Key, Department Chair, Automotive Center at (231) 591-5981. Thank you.

Survey Instructions:

A. To help us evaluate our current program and graduates, please review the "Curriculum Guide Sheet" on pages 2 and 3, and complete the survey on pages 5 and 6.

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY

AUTOMOTIVE SERVICE TECHNOLOGY
ASSOCIATE IN APPLIES SCIENCE DEGREE
FALL SEMESTER
Curriculum Guide Sheet

NAME OF STUDENT_____ STUDENT ID_____

Total semester hours required for graduation: 68

NOTE: A Meeting requirement for graduation on this sheet is the responsibility of the student. Compliance with this agreement will assure the student completion of the program in the time frame indicated. Your advisory must be consulted each semester before registering.

First Year

FIRST YEAR- FALL SEMESTER			**CREDIT**	**COMMENT/GRADE**
AUTO	111	Manual Transmission & Drivelines	4	_____
AUTO	112	Automotive Brake Systems	4	_____
AUTO	113	Automotive Electricity & Electronics	4	_____
PHYS	130	Concepts of Physics	4	_____
FIRST YEAR -WINTER SEMESTER				
AUTO	114	Automotive Engines	4	_____
AUTO	115	Suspension, Steering, Alignment Services	4	_____
AUTO	116	Engine Electrical Systems	4	_____
AUTO	117	Electronic Fuel Management Systems	4	_____
ENGL	150	English I	3	_____
SECOND YEAR FALL SEMESTER				
AUTO	200	Service Area *	6	_____
AUTO	211	Automotive Automatic Transmissions	4	_____
AUTO	213	Chassis Electrical/Electronics	4	_____
_____	___	Social Awareness Elective** (choose from list below)	3	
SECOND YEAR WINTER SEMESTER				
AUTO	250	Service Area **	6	_____
AUTO	214	Automotive HVAC	4	_____
ENGL	250	English 2	3	_____
_____	___	Cultural Enrichment Elective	3	_____

MATH 110 proficiency required for graduation (can be demonstrated by exam or MATH 110 course work). If the student has a 19 or better on the ACT examination he is not required to take MATH 110 Fundamentals of Algebra.

Computer literacy equivalent to that provided by ISYS 105 for graduation (can be demonstrated by exam or by course work).

*** May be replaced by AUTO 291, Co-op Work Experience, in corporate options.**

FERRIS STATE UNIVERSITY
COLLEGE OF TECHNOLOGY

AUTOMOTIVE SERVICE TECHNOLOGY
ASSOCIATE IN APPLIES SCIENCE DEGREE
GENERAL MOTORS ASEP-AUTOMOTIVE SERVICE EDUCATIONAL PROGRAM
Curriculum Guide Sheet

ENTRY CRITERIA:
1. Associate Degree in Automotive Body, Automotive Service Technology, Heavy Equipment Technology, or an equivalent from another educational institution.
2. A minimum 2.00 honor point average

TECHNICAL			CREDIT HOURS
AUTO	111	Manual Transmission & Drivelines	4
AUTO	112	Automotive Brake Systems	4
AUTO	113	Automotive Electricity & Electronics	4
AUTO	114	Automotive Engines	4
AUTO	115	Suspension, Steering & Alignment	4
AUTO	116	Engine Electrical Systems	4
AUTO	117	Electronic Fuel Mgmt. Systems	4
AUTO	200	Service Area	6
AUTO	211	Automotive Auto Transmission	4
AUTO	213	Chassis Electrical & Electronics	4
AUTO	214	Automotive HVAC	4
AUTO	250	Service Area	6

GENERAL EDUCATION	CREDIT HOURS
Communication Competence	
ENGL 150 English I	3
ENGL 211 Ind. Career Writing	3
Scientific Understanding	
PHYS 130 Concepts in Physics	4
Quantitative Skills (Proficiency)	
* MATH 110 Fund. Of Algebra	4
Cultural Enrichment	
Elective	3
Social Awareness	
Elective	3

**CULTURAL ENRICHMENT SHOULD BE CHOSEN FROM ONE OF THE FOLLOWING:

ARCH	244	FREN	French	MUSI	Music
ARTH	Art History	GERM	German	SPAN	Spanish
ARTS	Studio Arts	HIST	History	THTR	Theater
COMM	231	HUMN	Humanities		
ENGL	322	LITR	Literature		

**SOCIAL AWARENESS ELECTIVE SHOULD BE CHOSEN FROM ONE OF THE FOLLOWING:

SOCY 121	Introductory to Sociology
ANTH 122	Introductory to Cultural Anthropology
PSYC 150	Introduction to Psychology

AUTOMOTIVE SERVICE TECHNICIAN

Description: Students in the current automotive service program receive a comprehensive study of all ASE automobiles and light truck service areas, and develop the necessary related diagnosing and servicing skills. With the completion of general education requirements, a two-year A.A.S. degree is awarded. Graduates are prepared to enter the automotive service industry or may continue their education and earn a B.S. degree in FSU offerings such as Automotive and Heavy Equipment Management and Automotive Engineering Technology.

1. What types of service facility do you own/operate?

   ☐ Dealer ☐ Franchise

   ☐ Independent ☐ Other _____

2. Have you hired any of our two-year graduates in past years?

   ☐ Yes

   ☐ No

3. Are you satisfied with the comprehensive technical level of the current program format and the "Curriculum Guide Sheet"?

   ☐ Yes

   ☐ No ☐ Comments _____

4. Are you interested in continuing to hire these graduates in the future?

   ☐ Yes

   ☐ No ☐ Comments _____

5. How many graduates might you hire per year?

   ☐ None ☐ 3 to 4

   ☐ 1 to 2 ☐ 5 or more

6. What type of work would they perform?_____

7. What Technical courses do you consider to be essential?

- ☐ Manual Transmission & Drivelines
- ☐ Brake Systems
- ☐ Automotive Electronics
- ☐ Chassis Electrical
- ☐ Automotive Engines
- ☐ Automotive HVAC
- ☐ Automatic Transmissions
- ☐ Suspension, Steering, Alignment
- ☐ Engine Electrical
- ☐ IM 240
- ☐ Electronic Fuel MGMT System
- ☐ Others _____

8. What general education courses do you consider essential?

- ☐ English
- ☐ Speech
- ☐ Math
- ☐ Physics
- ☐ Computer Literacy
- ☐ History
- ☐ Technical Writing
- ☐ Other (specify): _____
- ☐ Psychology

9. What would be the approximate yearly starting wage?

- ☐ $15,000 to $20,000
- ☐ $21,000 to $25,000
- ☐ $26,000 to $30,000
- ☐ Over $30,000

10. What growth potential do you foresee for these graduates?

_____

11. What would you predict to be the earning level after 5 years?

- ☐ $15,000 to $20,000
- ☐ $21,000 to $25,000
- ☐ $26,000 to $30,000
- ☐ Over $30,000

12. How many of these graduates do you believe are necessary to fill the void in the market place? _____

13. Do you consider ASE certification necessary?

- ☐ No
- ☐ Yes, before hiring
- ☐ Yes, after hiring

SECTION 10

SUMMARY: ENROLLMENT, RETENTION, AND GRADUATION

All data is from intuitional research and the fact book by Mitz Day. The retention rate of the university is referred as the percentage of persisters. The university average from 1993 to 2000 has been 55 to 60 percent. The automotive service program retention rate from 1993 to 2000 has an average of 80 percent and has been as high as 90 percent one year. The retention rate for the automotive service program is one of the highest in the university and is 30 to 40 percent higher than the university average, as can be seen by Mitz Day's charts.

The university average graduation rate over a seven-year period for two-year degrees is at 33 percent. The automotive service program graduation rate is somewhere between 60 and 70 percent. Again, the automotive service program graduation rate is double that of the university's average.

The average high school grade point for automotive service is 2.79 and the average for the College of Technology is 3.04. Ten of the twelve departments in the College of Technology grade point average are under the average of the College of Technology. There is less than 2/10 of a spread between the majorities of the departments in the College of Technology. This means we should be looking at the median and not the mean. The median is 2.91 for the College of Technology which means 9 out of 12 departments are 1/10 of a spread or less.

The average ACT composite for the College of Technology is 19.4 and the average for the automotive service program 18.13.

With the placement rate of 100% and over half of them have sponsored positions just to enter one of the corporate options placement takes place at the start of their two year degree. The others are either placed at the end of their two-year degree or continue on to a Bachelor of Science degree.

Generally, we try to start 80 students every fall. The Automotive Service program enrollment has gone from 129 in 1996 to 160 in 2001. Starting 80 students, every year would come to about 160 students. However, this does not take into consideration the attrition rate of about 10 to 15% per year. We loose around 10 to 15 students each year for various different reasons. As a result are enrollment would be around 140 students. However, with internal transfers from other programs and with winter starting students along with students that may take 2 ½ to 3 years to graduate the number goes back up to around 160. Our enrollment numbers are stable at 160 on average. In the year 2000, the Automotive Service enrollment from 162 to 183. The increase in enrollment was caused by students staying in the Automotive Service program and waiting for the new Automotive Engineering Technology degree to be implemented. At this time, the AET designator was not in place however; all of the junior year classes were in place. In 2001, the students did program changes and 37 new AET students showed up. While, Automotive Service enrollment returned to 158 the total increase from 1999 to 2001 is from 162 to 195 for a total increase between the two programs of 33 new students.

We expect the new AET program to attract both incoming freshmen to the Automotive Service program and juniors to the Automotive Engineering Technology program. If we increase five to ten new freshmen because of the AET program over a four-year program period, we would increase 20 to 40 new students. In addition, with

attracting five to ten new juniors to the AET program, we would be looking at another 10 to 20 more students for the Automotive Service faculty-teaching unit. The outlook for growth caused by these two programs is from 30 to 60 new students over the next two to four years. With the department enrollment at 314 for the year 2001 and with a projected enrollment of 330 to 340 for the department for the fall of 2002 there has been a steady increase since 1996. With the projected enrollment increase over the next four years from 30 to 60 students the departments enrollment will be some where around 360 to 390. All the projected enrollment growth is in the Automotive Service program and Automotive Engineering Technology program.

The Automotive Service faculty group is responsible for all faculty-teaching loads for the Auto Service and Automotive Engineering Technology programs. With the enrollment going from 129 to 195 in 2001 and with the enrollment increasing to 210 to 0 for fall of 2002 and going up to 230 to 245 for fall of 2003 the overloads will be increasing from over 2 FTEs toward the equivalent of three full time faculty. This overload is already two times and will be three times any program in the College of Technology. Because of the long standing two person overload and a steady increase of enrollment in Auto Service and the massive increase of students generated by the AET program we will need to add a faculty position for the fall of 2003.

Auto Service Overloads

2000-2001	1.47	Actual
2001-2002	2.14	Projected
2001-2002	2.16	Actual
2002-2003	2.5	Projected

2002

Gary Gage: One year temp last 4-5 years.
Overload: Were lower in 2002 because of moving Vic Fowler to cover auto service classes
Mike Hachman: 3 Credits Over
Bill Wagner: 2 Credits Over
Ron Tuuri: 3 Credits Over

	Faculty/Staff	Faculty/Load	Overload	
	Gary Gage	17/45	19/39	
Auto Body Faculty	Vic Fowler	18/30	18/30	Overload not paid... internal transfer, but will need to be paid next year because of Gary Edgerly retirement.
	Mike Hachman	15/39	3/0	
	Bill Wagner	26/36	0/6	
	Ron Tuuri	23/39	0/3	

40/78 = 2.16 Overloads

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.
Based on the enrollment trends for the last six years for Auto Body and Auto Service my suggestion would be to run the Auto Body program with two faculty instead of three and transfer Gary Edgerly's position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the program will still have the highest overloads in the College of Technology.

Program	1996	1997	1998	1999	2000	2001	2002	2003
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

Will need to replace all three positions:

Faculty Name	Position	Date Retiring
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

Ferris State University

Retention and Graduation Rates of Full Time FTIAC Students

Two Year Degree Programs

Fall Term

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1993F	1613	% Graduated By	0	8	18	24	30	32
		% Still Enrolled In	55	31	18	10	3	1
		% Persisters	55	39	36	34	33	33
		% Non-Persisters	45	61	64	66	67	67

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1994F	1348	% Graduated By	0	8	18	25	31	34
		% Still Enrolled In	52	34	18	10	4	2
		% Persisters	52	42	36	35	35	36
		% Non-Persisters	48	58	64	65	65	64

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1995F	1479	% Graduated By	0	6	16	24	30	34
		% Still Enrolled In	56	36	23	12	6	2
		% Persisters	56	42	39	36	36	36
		% Non-Persisters	44	58	61	64	64	64

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1996F	1408	% Graduated By	0	10	20	27	34	
		% Still Enrolled In	58	35	21	11	4	
		% Persisters	58	45	41	38	38	
		% Non-Persisters	42	55	59	62	62	

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1997F	1404	% Graduated By	0	9	20	28		
		% Still Enrolled In	60	39	24	14		
		% Persisters	60	48	44	42		
		% Non-Persisters	40	52	56	58		

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1998F	1411	% Graduated By	0	11	20			
		% Still Enrolled In	58	37	24			
		% Persisters	58	48	44			
		% Non-Persisters	42	52	56			

Ferris State University

Retention and Graduation Rates of Full Time FTIAC Students

Two Year Degree Programs

Fall Term

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1999F	1391							
		% Graduated By	0	10				
		% Still Enrolled In	59	36				
		% Persisters	59	46				
		% Non-Persisters	41	54				

Entering Fall Term	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
2000F	1466							
		% Graduated By	0					
		% Still Enrolled In	62					
		% Persisters	62					
		% Non-Persisters	38					

Retention of Full Time FTIAC FSU Students 1993-2001

Two Year Degree Programs

Automotive Service Technology

Attendance Year

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1993F									
	AUSV	56							
			% Graduated By	0	46	53	58	60	60
			% Still Enrolled In	83	14	7	2	0	0
			% Persisters	83	60	60	60	60	60
			% Non-Persisters	17	40	40	40	40	40

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1994F									
	AUSV	31							
			% Graduated By	0	51	58	67	70	70
			% Still Enrolled In	90	29	9	3	0	0
			% Persisters	90	80	67	70	70	70
			% Non-Persisters	10	20	33	30	30	30

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1995F									
	AUSV	51							
			% Graduated By	0	23	35	35	37	39
			% Still Enrolled In	76	22	6	4	4	2
			% Persisters	76	45	41	39	41	41
			% Non-Persisters	24	55	59	61	59	59

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1996F									
	AUSV	54							
			% Graduated By	0	38	53	57	57	
			% Still Enrolled In	77	17	0	0	0	
			% Persisters	77	55	53	57	57	
			% Non-Persisters	23	45	47	43	43	

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1997F									
	AUSV	64							
			% Graduated By	0	34	45	50		
			% Still Enrolled In	73	19	11	6		
			% Persisters	73	53	56	56		
			% Non-Persisters	27	47	44	44		

Retention of Full Time FTIAC FSU Students 1993-2001

Two Year Degree Programs

Automotive Service Technology

Attendance Year

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1998F									
	AUSV	70							
			% Graduated By	0	35	45			
			% Still Enrolled In	75	23	7			
			% Persisters	75	58	52			
			% Non-Persisters	25	42	48			

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1999F									
	AUSV	71							
			% Graduated By	0	39				
			% Still Enrolled In	80	24				
			% Persisters	80	63				
			% Non-Persisters	20	37				

Entering Fall Term	Major	N		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
2000F									
	AUSV	62							
			% Graduated By	0					
			% Still Enrolled In	79					
			% Persisters	79					
			% Non-Persisters	21					

College of Technology
Average HSGPA and ACT Scores by Department
Fall 2001 FTIACS (First Time in Any College Student)

		Avg HSGPA	Avg ACT Comp	Avg ACT English	Avg ACT Math	Avg ACT Reading	Avg ACT Science
Ferris State University		3.14	19.78	18.34	19.76	19.93	20.56
College of Arts and Sciences	A/S	3.53	21.76	20.74	21.60	22.13	22.03
College of Allied Health Sciences	AHS	3.14	19.53	18.43	19.12	19.83	20.18
College of Business	BUS	3.05	19.71	18.27	19.79	19.76	20.51
College of Education & Human Serv	EDU	2.84	18.79	17.50	18.41	19.04	19.71
Kendall College of Art & Design	KEN	3.20	20.84	20.16	19.59	22.35	20.69
College of Technology	TEC	3.04	19.40	17.29	20.01	19.16	20.59
University College	UNI	3.13	18.06	16.62	17.87	18.22	19.07
Architectual Tech & Facilities Mgmt	ATFM	2.95	19.70	17.48	20.52	19.52	20.91
Automotive	AUTO	2.79	18.13	16.04	18.62	17.62	19.75
(old Construction Facilities Management)	CNFM	2.20	15.00	14.00	17.00	14.00	16.00
Construction Technology & Managment	CTMG	2.85	19.95	17.18	20.32	17.97	19.71
Electronics/CNS	EECN	2.82	20.43	18.09	20.95	20.69	21.45
Heavy Equipment	HEET	2.89	19.13	16.97	19.06	19.74	20.45
HVACR	HVAC	3.84	19.67	17.38	20.16	20.42	19.92
Mechanical Design	MDSN	3.67	20.32	18.37	21.25	19.81	21.33
Manufacturing Engineering Technology	MFGE	3.11	20.50	17.65	21.20	20.40	21.95
Printing & Imaging Technology Mgmt	PDGI	2.87	18.68	17.05	18.02	18.83	20.22
Plastics and Rubber	PLRU	2.98	20.32	17.88	21.28	19.56	21.88
Surveying	SURE	2.88	21.00	19.57	21.57	19.71	22.43
Welding	WELD	2.91	18.55	15.86	19.32	18.68	19.91

Source: Office of Institutional Research g:\...\ipeds\f01\gregkeyhsgpaact2.xls

AUTHORITY: PL 105-332 COMPLETION: Voluntary (Consideration for funding will be possible only if form is returned).	Michigan Department of Career Development COMMUNITY COLLEGE SERVICES UNIT 608 W. Allegan, Lansing, Michigan 48933 PO Box 30714, Lansing, Michigan 48909	Direct questions regarding this form to the Community College Services Unit, (517) 373-3360

COMMUNITY COLLEGE SUMMARY REPORT FOR SELF-STUDY EVALUATION OF OCCUPATIONAL PROGRAMS

July 1, 2001 through June 30, 2002

SUBMITTING EDUCATIONAL AGENCY	College Ferris State University			
	Contact Person Dr. Thomas Oldfield			
	Title Associate Vice President for Academic Affairs			
	Telephone (231)-591-2553	Ext.	Fax (231)-591-3592	E-Mail OldfieldT@ferris.edu

GENERAL INSTRUCTIONS

Complete this Summary Report using the form provided for EACH occupational program to be reviewed according to the college evaluation schedule. Exception: In special circumstances similar programs with different CIP codes may be evaluated together, however separate demographic pages (1 and 2 of 6) must be completed for each program. Submit it as the program evaluation is completed, but no later than June 30, 2002. **DO NOT SUBMIT COPIES OF COMPLETED SURVEY INSTRUMENTS**.

A complete copy of the total evaluation document for **EACH** program must be kept on file at the college. This document may be requested at a later date for state or federal audit purposes. Specific definitions, program components, and reporting requirements related to this Summary Report are found in Section 5.0 of the Dean's Guide to Federally Reimbursed Community College Occupational and Technical Education Programs.

CIP CODE 470604
PROGRAM NAME(S) Automotive Service Technology

PART I. SUMMARY REPORT FORMAT

The following data and comments are recorded to summarize the results of the college Self-Study Evaluation. Refer to the Dictionary of Community College Terminology on the website http://www.michigancc.net for definitions.

A. **PROGRAM ENROLLMENT** (Previous Three-Year Figures)

YEAR	UNDUPLICATED HEADCOUNT	STUDENT CREDIT HOURS FOR SPECIALTY COURSES	STUDENT CONTACT HOURS
2000/2001	183		
1999/2000	162		
1998/1999	167		

B. **PROGRAM GRADUATES** (Previous Three-Year Figures)

YEAR	DEGREES CONFERRED
1999/2000	52
1998/1999	39
1997/1998	52

C. POSITIVE PLACEMENT OF DEGREES CONFERRED (Previous Three-Year Figures)

YEAR	PLACEMENT	HEADCOUNT	WAGE PER HOUR ($ .xx)
1999/2000	Related Employment	22	$ Unknown
	Unrelated Employment	0	$ Unknown
	Military/Continuing Education*	17	$ Unknown
1998/1999	Related Employment	12 +	$ Unknown
	Unrelated Employment	0	$ Unknown
	Military/Continuing Education*	17	$ Unknown
1997/1998	Related Employment	4	$ Unknown
	Unrelated Employment	1	$ Unknown
	Military/Continuing Education*	22	$ Unknown

*If a student is employed and attending school, default to report the student as employed.

D. PERKINS III CORE PERFORMANCE INDICATORS FY 2000-2001

CORE INDICATOR	2001-20[illegible] State Performance Levels (minimum)	2000-2001 Performance Levels	
		College	Program
1P1A: % students passing ALL ACADEMIC COURSES	69.19	68.27	63.75
1P2A: % students passing ALL OCCUPATIONAL COURSES	81.65	73.86	55.45
2P1: % of first-time, full-time occupational students who entered in Fall 1998 and w received an award by August 20, 2001	10.82	22.62	42.30
3P1: % completers who were employed, entered military service, or continued their education as compared to total program completers 1999-2000 graduates	91.01	53.13	64.54
4P1: % men and women enrolled in programs considered nontraditional for their gender as compared to total enrollment in nontraditional programs	17.99	9.36	2.00
4P2: % men and women who received an award in a program considered nontraditional for their gender as compared to total students that received an award in nontraditional programs	13.25	8.30	1.00

*For students enrolled during identified year.

C-1. SUMMARY OF EVALUATION PERCEPTIONS BY ADMINISTRATORS AND FACULTY

COMMENTS:

Number of Administrators and Faculty Participating: [10]

PROE: Faculty Perception

1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
Goals and Objectives							
1. Participation in Development of College Occupational Education Program Plan		1	1	4	3		
2. Program Goals			1	1	7		
3. Course Objectives			1	2	6		
4. Competency Based Performance Objectives				4	5		
5. Use of Competency Based Performance Objectives				5	4		
6. Use of Information on Labor Market Needs				2	7		
7. Use of Information on Job Performance Requirements				4	5		
8. Use of Profession/Industry Standards				1	8		
9. Use of Student Follow-Up Information		1	1	2	5		
Processes							
10. Adaptation of Instruction			1	2	6		
11. Relevance of Supportive Courses	1	2			6		
12. Coordination with Other Community Agencies and Educational Programs			2	3	4		
13. Provision for Work Experience, Cooperative Education or Clinical Experience	1		1	3	4		
14. Program Availability and Accessibility				3	6		Need more advertising
15. Provision for the Disadvantaged			3	4		2	
16. Provision for the Handicapped		1	4	2		2	
17. Efforts to Achieve Sex Equity			1	4	3	1	Very few women in field
18. Provision for Program Advisement					9		
19. Provision for Career Planning and Guidance				2	7		
20. Adequacy of Career Planning and Guidance				3	6		
21. Provision for Employability Information					9		
22. Placement Effectiveness for Students in this Program			1		8		
23. Student Follow-up System		1	1	6	1		No consistency in follow-up
24. Promotion of this Occupational Program		1	1	4	3		
Resources							
25. Provision for Leadership and Coordination			2	4	3		
26. Qualifications of Administrators and/or Supervisors		1	1	3	4		
27. Instructional Staffing		1	2	3	3		
28. Qualifications of Instructional Staff				1	8		
29. Professional Development Opportunities		1	1	3	4		
30. Use of Instructional Support Staff		1		5	2	1	
31. Use of Clerical Support Staff				4	5		
32. Adequacy and Availability of Instructional Equipment	1		2	3	3		Need many new tools
33. Maintenance and Safety of Instructional Equipment				2	7		
34. Adequacy of Instructional Facilities			1	7	2		
35. Scheduling of Instructional Facilities			1	4	4		Lab Schedules Need Improved
36. Adequacy and Availability of Materials and Supplies				4	5		
37. Adequacy and Availability of Learning Resources				4	4	1	
38. Use of Advisory Committees			1		8		
39. Provisions in Current Operating Budget	2	2	3	2			Need recruiting funds
40. Provisions in Capital Outlay Budget for Equipment	2	1	4	2			

RECOMMENDATIONS:

CHIEF OCCUPATIONAL EDUCATION STRENGTH OF YOUR PROGRAM

- Excellent faculty and staff, provide current technology to our students.
- Course outlines, syllabi, and course objectives are clearly defined for each class.
- The instructors have a lot of knowledge and the courses taught require special skills.
- The high performance programs spark high interest from students and should be utilized to broaden their education in the Automotive Field.
- Technical diversity of the faculty
- The support received from corporate sponsors
- The program options offered to our students.
- Industrial support
- Courses are becoming more competency based.

WHAT ARE THE MAJOR NEEDS FOR IMPOVEMENT IN YOUR PROGRAM

- Additional funding for equipment and supplies
- New building
- Money is not always there to keep the program up-to-date as needed.
- We need more equipment and advertising of our programs.
- We need more access to training in our subject matter.
- More participation by faculty in the budget planning process
- Recruiting, faculty needs to take a more proactive approach to getting students.
- A more hands on approach by our department curriculum committee.
- University needs to prioritize instruction as #1
- Better equipment lab facilities
- [illegible]ventilation equipment for multipurpose labs in both "Brakes" lab and new lab in the "Body Shop".
- We need someone the maintain school vehicles.
- It is not uncommon for faculty member to spend 2 to 3 hours a week getting lab vehicles prepared for class. From having to clean snow off vehicles, jump starting due to dead batteries and fueling the vehicles is very time consuming. The faculty member in preparation for class could use this time.

C-2. SUMMARY OF EVALUATION PERCEPTIONS BY STUDENTS

COMMENTS:

Number of Students Participating: [146]

PROE: Student Perceptions							
1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
1. Courses in your occupational program are:							
*Available and conveniently located.	0	5	21	88	58	0	
*Based on realistic prerequisites.	0	6	9	68	53	0	
*Available at moderate cost.	18	14	36	43	11	2	Cost Not Moderate
2. Written objectives for courses in you occupational program:							
*Are available to students.	0	2	19	80	41	3	
*Describe what you will learn in the course.	0	1	16	58	49	1	
*Are used by the instructor to keep you aware of your progress.	3	6	29	55	28	4	
3. Teaching methods, procedures, and course content:							
*Meet your occupational needs, interests, and objectives.	2	6	29	55	32	1	
*Provide supervised practice for developing job skills.	0	7	19	54	46	0	
4. Related courses (such as English, Math, and Science) are:							
*Pertinent to occupational instruction.	8	5	33	41	29	2	
*Current and meaningful to you.	16	21	44	33	12	2	
5. Work experience (or clinical experience) in your occupational program is:							
*Readily available at convenient locations.	11	12	36	27	38	3	
*Readily available to both day and evening students.	10	10	22	35	23	23	No Evening
*Coordinated with classroom instruction.	4	6	30	43	38	13	Do What's th-
*Coordinated with employer supervision.	3	4	20	46	32	12	
6. Career planning information:							
*Meets your needs and interests.	3	8	22	45	29	20	Very Well Thought Out
*Helps you plan your program.	5	8	19	49	34	10	
*Helps you make career decisions and choices.	5	6	22	54	29	9	
*Helps you understand your rights and responsibilities as an employee.	4	3	30	50	26	11	No females in classes
*Helps you evaluate job opportunities in relation to salary, benefits, and conditions of employment.	3	11	37	45	16	9	
*Is provided by knowledgeable, interested staff.	3	12	29	47	20	9	
*Explains nontraditional occupational opportunities for both sexes.	8	6	28	40	24	13	
7. Job success information on former students in your occupational program:							
*Is provided to help you make career decisions.	2	14	27	51	16	12	Do this before you even get to school (ASSET stuents).
*Indicates how many job opportunities there are in your occupation.	2	10	33	50	13	11	
*Identifies where these job opportunities are located.	1	18	32	43	16	9	
*Tells about job advancement opportunities.	1	15	33	46	14	9	
8. Placement services are available to:							
*Help you find employment opportunities.	4	14	24	47	22	10	
*Prepare you to apply for a job.	7	8	34	45	18	8	
9. Occupational instructors:							
*Know the subject matter and occupational requirements.	3	9	20	49	29	9	
*Are available to provide help when you need it.	0	4	21	43	54	2	
*Provide instruction so it is interesting and understandable.	0	6	21	46	47	2	
10. Instructional support services (such as tutoring, lab assistance) are:							
*Available to meet your needs and interests.	0	6	25	44	37	7	
*Provided by knowledgeable, interested staff.	2	10	25	32	30	17	

11. Instructional lecture and laboratory facilities:							
*Provide adequate lighting, ventilation, heating, power, and other utilities.	2	4	23	41	33	1	
*Include enough workstations for the number of students enrolled.	3	5	31	47	39	1	
*Are safe, functional, and well maintained.	2	6	15	48	55	0	
*Are available on an equal basis for all students.	1	4	21	45	50	3	
12. Instructional equipment is:							
*Current and representative of industry.	0	5	31	38	47	0	Need more equipment
*In sufficient quantity to avoid long delays in use.	2	6	33	50	29	0	
*Safe and in good condition.	1	7	20	76	35	1	
13. Instructional materials (e.g., textbooks, reference books, supplies) are:							
*Available and conveniently located for use as needed.	1	3	26	45	43	0	
*Current and meaningful to the subject.	1	8	15	49	32	1	
*Not biased toward "traditional" sex roles.	4	9	35	30	31	4	No Female Instructors
*Available at reasonable cost.	33	20	22	28	18	1	Buying tolls isn't cheap No college book is available at a good price!

RECOMMENDATIONS:

- Service floor needs more lights, especially droplights.
- Local businesses need to be more involved with students in the automotive programs.
- Program should offer more performance oriented classes and laboratories.
- The program needs to invest in more car batteries.
- Instructional equipment needs to be updated, currently behind industry.
- Work experience needs to be readily available at convenient locations, a large amount of the student felt they were forced to work at specific locations.
- Need to implement more computer based training (COTs), not enough.
- Need more computers with CBT software.

COMMENTS:

Number of Advisory Committee Members Participating: [ ]

PROE:
Advisory Committee

1=poor, 2=below expectations, 3=acceptable, 4=good, 5=excellent, ?=don't know	1	2	3	4	5	?	Comments
1. Instructional program content and quality are:							
*Based on performance objectives that represent job skills and knowledge required for successful entry-level employment.	0	0	0	1	7	0	
*Designed to provide students with practical job application experience.	0	0	0	0	8	0	
*Responsive to upgrading and retaining needs of employed persons.	0	0	0	2	6	0	
*Periodically reviewed and revised to keep current with changing job practices and technology.	0	0	0	1	7	0	
2. Instructional equipment is:							
*Well maintained.	0	0	0	0	7	1	
*Current and representative of that used on the job.	0	0	0	0	7	1	
3. Instructional facilities:							
*Provide adequate lighting, ventilation, heating, power, and other utilities.	0	0	0	1	6	0	
*Allocate sufficient space to support quality instruction.	0	0	0	1	7	0	
*Meet essential health and safety standards.	0	0	0	0	6	2	
4. Placement:							
*Services are available to students completing the program.	0	0	0	0	8	0	
*Job opportunities exist for students completing the program or leaving with marketable skills.	0	0	0	0	8	0	
5. Follow-up studies on program completers and leavers (students with marketable skills):							
*Demonstrate that students are prepared for entry-level employment.	0	0	0	1	7	0	
*Collect information on job success and failure of former students.	0	0	0	1	5	2	
*Provide information used to review and, where warranted, revise the program.	0	0	0	0	5	2	

RECOMMENDATIONS:

1. What are the major strengths of the college occupational program in your field(s)?

   - Manufacture specific for my dealership needs
   - Faculty involvement with the students and industry to obtain current technology and equipment to keep the program at the for front of knowledge.
   - Positive student attitude, also when asked students they state they have proper and sufficient hands on and classroom training.
   - Conducts real world examples of problem the technician will face in the field using the same tools and equipment that dealers use.
   - On the job experience and brand specific auto training.

2. What are the major needs for improvement in the college's occupational program in your field(s)?

   - More test vehicles and assemblies
   - Donations from the manufacturer's and industry to get a more diverse base of product to train with.
   - More candidates meeting with high school guidance counselors regarding how positive and fulfilling it can be. Ability to make more people aware of the program.
   - More training books, cars, motors, ect...
   - Maintaining a supply of current level vehicles in a good working condition.
   - Having a sufficient supply of components for the students to work on.
   - Change the co-op times so the students are not working the winter sessions. Dealers are much slower in the winter and it is harder for the students to learn during that time.

3. Do you have additional comments or suggestions for the program or for utilization of the advisory committee? If so, please state briefly.

   - Pete Alley does a great job! He is a big asset to Ferris State University and the CAP program.
   - I would like to see the AYES program be connected with the CAP program and have the students meet and discuss the programs. Communicate, Communicate, Communicate.
   - These students have chosen this program for its specific technical content. I believe more computer classes or automotive classes should replace cultural enrichment and social awareness.

SECTION 12

CONCLUSIONS

1. **The Automotive Service Program mission is central to the mission of Ferris State University.**

   The mission of the Automotive Service program is to prepare students for the employment in the Auto Service repair field and to be participative members of society.

2. **Uniqueness/Visibility and demand by students**

   These response s reinforce once more the Auto Service Program's ability to produce high quality, highly employable graduates. Once more, the large number of those who would consider Ferris Bachelor's degree or who already have earned one – suggests that the program educates as well as trains its students. The current combination of the theoretical and technological phases offered by the Auto Service Program, and the professional and financial success of its graduates, prove this a strong, vital program now, and for the future of the university.

3. **Service to State and Nation and demand for graduates**

   Our labor market analysis from the MOIS indicates a strong demand for our [illegible], as evidenced by their placement rate and their high salaries.

   Job Placement/Positions/Salaries from alumni survey (Questions 1-6)

   The survey indicated that nearly 89% (32/36) of the program's graduates have found positions as service technicians, managers, corporate trainees, automotive instructors, service and release engineer, production supervisors, and laboratory specialist. A large amount of those graduates had a job lined up prior to graduation of their program. The average length of employment is 4.72 for hourly wage employees and 2.34 years for salary employees, and over 97% (35/36) of these jobs are in Michigan. Many of our graduates are working at the corporate level with companies like General Motors, Cummins Diesel, Ford Motor Company, Daimler Chrysler, and several small automotive dealerships and manufactures. Our professional programs with Ford, General Motors, and Daimler Chrysler, co-op and internship opportunities, and solid reputation in the automotive service industry were key factors cited in many of the responses: "*with the experience I got at Ferris, I found many areas of work I could have chosen*", "*the program has a good reputation in the field. It really helps getting a foot into the door having FSU on your resume*" and "*the co-op was the most valuable when employed at the dealer. Courses were most valuable for my present job too.*"

The average starting salary for Auto Service graduates was $37,282.84 and the average hourly wage was $12.82 per hour. The state average salary for Auto technicians is between $21,096 and $33,252. The national average salary is $29,305. According to the MOIS, system the skilled technician makes two to three times the inexperienced trainees. The auto service faculty has been very involved in new curriculum development with the addition of General Motors, Ford, and Daimler Chrysler options in 1988, 1991, and 1996 respectively. The faculty started in 1987 to bring the corporate options into the auto service program. We receive over $200,000 per year in vehicle donations alone, plus training material, equipment, manuals, engines, tools, and faculty update training. If you look in Appendix A, page you will see a training history that is attached behind each faculty's resume. Auto service faculty has one of the model faculty development programs at Ferris. Many of them are multiple pages in length of the courses they attended every year. Again, the corporation not Ferris pays for all of the development. The department pays for the travel and many of the faculty pay for their meals. If you will look at pages 5 and 6 you will see the Ferris Auto Service Program model along with the new corporate model that General Motors started to sponsor in 1996. To my knowledge Ferris is the only school in the United States to have all three corporate options and the four-year automotive degree option. In addition, Ferris students can also chooses to go into education, small business management, along with many other offerings at Ferris.

As can be seen the automotive service technology program is a very large and complex program responsible for the creation of a department. It is the backbone of the bachelor degree programs. With out the Automotive Service program it's very questionable if the bachelor degree programs could survive on transfer students.

However, it should be noted that Ferris State University automotive service graduates start higher than the state and national averages for all technicians. See labor market analysis from MOIS.

4. Quality of Instruction
Program Education/Certification (Questions 7 and 8) from alumni survey

When asked "which phases of your on-campus education (courses, service floor, or co-op was most valuable in preparing you for work," 68% feel the course work was effective in preparing them for work in the field of Automotive Service Technology. 29% feel it was somewhat effective and 3% feel is was not effective at all. 62% of our graduates were able to obtain their ASE/Michigan certifications following completion of our Automotive Service Technology program, while 38% where unable to obtain them. Part of that 38% chose not to take their certification exams due to jobs not requiring it and the factor of time.

Effectiveness of Auto Service Course Work (Question 9) from alumni survey

68% feel the course work was effective in preparing them for work in the field of Automotive Service Technology. 29% feel it was somewhat effective and 3 % feel it was not effective at all.

5. **Service to non-majors**

We offer two courses for non-majors. The first course teaches students how to by a vehicle, lease one, buy car insurance, etc. The second course is more technical and deals with some of the new options on vehicles such as air bags. However do to the high level of overloads for faculty we cannot offer these courses.

6. **Facilities and equipment**

Our facility was built in 1956 and should be replaced before it starts effecting our enrollment. Over 97% (35/36) of the respondents said that the technological equipment used in their courses was up to date. Several commented that they found even newer equipment on the job. The instructors are constantly being trained and new equipment is always arriving. Only 3% (1/36) respondents answered no to this question, stating that equipment is not up to pace with the advancements in the industry.

Many respondents feel that computers are very helpful and the user needs to have a strong understanding of how to use them, including the software. A large number of respondents hope that Ferris State University's automotive department would stress computer skills even more. 90% of most respondents work is done at the dealership involves computers.

Computers can be very useful for diagnostics and in everyday use as long as they don't crash or lockup.

When writing warranty strategies and for customer info.

Anymore the kids coming into the program probably have more computer skills than we ever had while going through the program.

7. **Library Information Resources**

Library information resources are good.

8. **Faculty: professional and scholarly activities**

Faculties are all involved with professional organizations, which reflect their respective interests. All faculty serve on many different committees at the program, department, college, and university level. All faculty are involved in student advising. Many have written papers and presented them. The NACAT (National Association of College Automotive Teachers) meeting was held at Ferris State University in the year of 2000 for the second time in the past ten years.

9. Administrative Effectiveness

Administration has been very successful in obtaining industrial support in terms of equipment donations and scholarships from major corporations. With our donations of vehicles and other equipment, and training from industry, we receive around 2 to 2.5 million dollars in donations every year on a continuing rotational basis. As can be seen, the quality of the Automotive Service program is financially linked to industry. 70% to 90% of the money it takes to run the Automotive Service Program comes from industry. With the high probability of the vocational funds being eliminated in the near future, the need for a strong tie to industry will be essential for any program at Ferris to be competitive.

Auto Service Overloads

2000-2001	1.47	Actual
2001-2002	2.14	Projected
2001-2002	2.16	Actual
2002-2003	2.5	Projected

2002

Gary Gage: One year temp last 4-5 years.

Overload: Were lower in 2002 because of moving Vic Fowler to cover auto service classes

Mike Hachman: 3 Credits Over

Bill Wagner: 2 Credits Over

Ron Tuuri: 3 Credits Over

	Faculty/Staff	**Faculty/Load**	**Overload**	
	Gary Gage	17/45	19/39	
Auto Body Faculty	Vic Fowler	18/30	18/30	Overload not paid... internal transfer, but will need to be paid next year because of Gary Edgerly retirement.
	Mike Hachman	15/39	3/0	
	Bill Wagner	26/36	0/6	
	Ron Tuuri	23/39	0/3	
			40/78 = 2.16 Overloads	

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.

Based on enrollment trends for the last six years for Auto Body and Auto Service my suggestion would be to run the Auto Body program with two faculty instead of three and transfer Gary Edgerly's position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the program will still have the highest overloads in the College of Technology.

Program	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

Will need to replace all three positions:

Faculty Name	**Position**	**Date Retiring**
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

SECTION 13

RECOMMENDATIONS

Enhance program because of the drastic increase in enrollment and future projections for enrollment increases. The recommendation from the 1996 program review study was to enhance because of projected enrollments. The APRC decided on a rating of continuous. Now after six years of steady growth, all the resources are at critical levels. S&E money has stayed the same for the past three years. With inflation and enrollment increases the auto services S&E budget will go into the red this year. One must understand that the S&E expenses for the auto program are down to a bare minimum (barely functional) phone, copies, and travel for internships (see attached budget sheet). With every new student into the program requires me to send a faculty on internship visits, which depletes the S&E budget even more. Increasing enrollment from 129 in 1996 to 220-230 for fall 2002. The auto department enrollment was 230 in 1996 and is going to be at 336 for fall 2002. This is approximately a 100 new students increase. With 7 of the 12 departments averaging at 100-125 students, one can see an increase of a 100 students is an equivalent of a whole new department in the College of Technology.

With the AET degree, just getting started which is one of the fastest growing degrees in the university. We enrolled 37 new students for fall 2001 and 29 new students for fall 2002. This is a total of 66 new students in one physical year. We graduated four and three withdrew for a total of 59 new students for the fall of 2002. No one could have expected this kind of growth rate. I am receiving many calls from both freshman and transfer students about the new AET degree. I have placed students that do not have an associate degree in Auto Service because of being short of a general education courses. This should cause the enrollment in Automotive Service to increase this fall. Over the next four years, if we bring in five new freshmen each year we will increase our enrollment another twenty students, because of the AET program. Also, with 5 new transfer students (juniors) for the next two years we will increase another 10 students for a minimum total of 30 more projected new students. The AET program has only run one year so we don't have an average amount of student enrollment. With the present enrollment in the AET program and the projected new enrollment of 30 students this means the program should run at a minimum of around 80 to a maximum of 100 new students.

All of the resources for Auto Service and AET come from the Auto Service program. The S&E money, faculty resources, and equipment money all come from the Auto Service program. With the enrollment growth of the Auto Service program over the last six years and with the alarming growth rate of the AET program all resources are being depleted at expediential rate.

Remember we only added two new classes when we started the AET program. These two new courses have auto designators, which will help raise the productivity of auto a little. However, the rest of the 70 credits come from other departments. None of the other department has set aside a course section for the AET program. The AET students just fill all their other programs empty sections. This has and will raise the productivity of many

other programs in the College of Technology as well as Allied Health's. Not to mention 60 AET students taking other general education courses.

- **Faculty Positions:**

  Highest number of overloads in the College of Technology. With the past enrollment increases and the projected enrollment increases I am requesting the new faculty position for 2003.

- **A&E money allocation**

Department	S&E	Students
Printing	50K	118
Welding	50K	116
Automotive	50K	336

With this comparison of 100 to 300 students, the auto department S&E budget should be 150K. This might not be realistic because of consumables never the less no department should have three times the resources of another department. That is unfair to the students who pay tuition and the taxpayers who fund the university programs. All I can say is that the auto program S&E budget needs to be increased drastically. As can be seen by chart (S&E Budget page) I have no money to spend on consumables or if anything breaks.

- **Equipment money**

The Vocational Education money has been reduced in the last couple of years. The College of Technology equipment list does not take into consideration program size, productivity, credit generation, number of students, etc.

Computer equipment

Computers have become equipment, which has lowered money for actual equipment. Computer ratios throughout the College of Technology are extremely varied. One program has one computer per student while our computer lab has 14 computers for 336 students.

As auto enrollment has increased and as is continuing to increase my equipment allocation is unknown from year to year. The automotive computer lab has 14 old computers. If a power supply or hard drive goes bad, please remember I have no S&E money to repair them.

AUTO SERVICE

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	0.00	413.32	63.60	78.34	337.07	0.00	100.68	0.00	211.81	155.88	0.00	0.00	1,360.70
Lab Supplies/Parts C	0.00	0.00	298.84	246.62	578.83	0.00	523.04	458.17	280.40	750.10	770.31		3,906.31
Travel	0.00	942.80	217.00	39.68	379.88	1,156.45	1,275.09	339.39	1,154.52	1,172.04	947.49	1,020.24	8,644.58
Fuel/Credit Cards	0.00	324.80	28.23	13.20	0.00	12.04	145.82	172.00	33.47	23.04	24.26		776.86
Fuel/Motor Pool	201.06	108.92	68.69	108.68	77.77	79.11	159.03	28.08	117.99	262.31	64.10		1,275.74
Copy Center	53.18	29.75	53.15	61.64	404.10	0.00	169.00	337.90	64.15	99.75	11.55		1,284.17
Copy Machine	0.00	520.50	413.85	656.35	751.60	871.40	246.05	874.65	855.60	903.00	396.30	85.70	6,575.00
Telephone Eq	302.47	302.47	302.47	310.84	307.09	307.09	307.09	307.09	307.09	307.09	307.09		3,367.88
Long Distance	350.78	239.19	446.14	348.89	372.84	252.88	426.74	347.29	308.54	305.15	64.10		3,462.54
TOTAL	907.49	2,881.75	1,891.97	1,864.24	3,209.18	2,678.97	3,352.54	2,864.57	3,333.57	3,978.36	2,585.20	1,105.94	30,653.78

AHM

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	0.00	247.46	169.15	89.64	126.88	65.34	0.00	0.00	15.96	104.62	0.00	0.00	819.05
Lab Supplies/Parts C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14	0.00		4.14
Travel	0.00	1,947.52	0.00	0.00	10.00	0.00	0.00	3,480.84	29.15	0.00	0.00		5,467.51
Fuel/Credit Cards	0.00	49.52	0.00	0.00	0.00	21.98	0.00	0.00	89.10	34.87	0.00		195.47
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.35	0.00	0.00		33.35
Copy Center		56.00	226.40	13.00	44.80	0.00	13.00	13.00	9.00	96.76	0.00		471.96
Copy Machine		143.35	55.10	161.45	184.1	270.30	118.30	360.70	166.60	271.35	93.55	51.70	1,876.50
Telephone Eq	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78	148.78		1,636.58
Long Distance	98.05	42.46	141.16	29.71	100.94	92.17	105.63	10 7.20	74.23	109.52	117.26		911.13
TOTAL	246.83	2,635.09	740.59	442.58	615.50	598.57	385.71	4,003.32	566.17	770.04	359.59	51.70	11,415.69

AUTO BODY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MARCH	APRIL	MAY	JUNE	TOTAL
Office Supplies	32.97	248.3	47.18	0.00	39.27	6.12	132.7	153.58	39.6	53.04	0.00	0.00	782.76
Lab Supplies/Parts C	0.00	0.00	1,056.54	0.00	296.37	0.00	320.86	0.00	1,727.98	356.37	1,203.61		4,961.73
Travel	0.00	0.00	37.20	31.00	0.00	497.00	41.60	0.00	39.68	0.00	0.00		646.48
Fuel/Credit Cards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Fuel/Motor Pool	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Copy Center	0.00	0.00	0.00	0.00	0.00	0.00	39.00	82.60	0.00	25.29	0.00		146.89
Copy Machine	0.00	73.90	25.35	107.70	49.40	126.20	74.50	175.10	71.60	102.55	2.20	1.45	809.95
Telephone Eq	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13	19.13		210.43
Long Distance	13.42	2.67	9.43	12.75	2.70	8.44	1.63	1.07	0.86	9.11	9.62		71.70
TOTAL	65.52	344.00	1,194.83	170.58	436.87	656.89	629.42	431.48	1,898.85	565.49	1,234.56	1.45	7,629.94

TOTAL $49,699.41

SECTION 13

RECOMMENDATIONS 1996

Enhance the Program

The program meets or exceeds all criteria and it warrants expansion in enrollment to meet the manpower needs in the State of Michigan as demonstrated by MOIS, employer survey, and the alumni survey. The building is capable of handling more students. There may be a need to hire more part timers, Para pros, and if the enrollment dictates it, a full time faculty. At present, we expect an increase of enrollment in the fall of 1997 due the high enrollment this fall. In addition, with the start of the Ford option next year we expect to increase our enrollment. Likewise, in the fall of 1998 we expect another slight increase in enrollment due to the Chrysler option starting its first full start of students. Chrysler would like us to start a sequence of students every year. If the student demand will support Chrysler classes, then we would have another increase in enrollment. At this date over last year, we have three times the students signed up for the fall of 1997. If only half of these indicators come true, we will still have to hire faculty to handle the load. At this time no further office, support or staff would be needed to support the program and building. Since 70% to 90% of our money to operate the program comes from outside the university, there would be very little cost associated with a steady expansion in enrollment. However, if the vocational funds were eliminated, the university would need to find a source of money for all the technology programs.

Please read Appendix A pages 173-18 1. The Automotive Service Technology program is one of the key programs at the university. The program started in 1952 with 20 students and one teacher and is now one of the three departments that make up the

largest college in the university. The Automotive Service Technology program was the parent program for all the other programs in the Automotive and Heavy Equipment department. From this program you can see what other progr4have been developed. Many new options and directions have been implement in the last few years. These new directions taken in the past few years have made the auto service program one of the best-sponsored programs by outside industry at Ferris. These links to business and industry for financial support are crucial for any program at Ferris to keep up with the rapid advances in technology.

APPENDIX A

Program: Automotive Service Technology
Department: Automotive
College: Technology

I. Purpose of the program:

A. Describe the goals and objectives of the Program (Refer to the role and mission statement of the program):

The mission of the Automotive Service Technology program is to prepare students for employment in the Auto Service repair field and to be participative members of society.

Goals:

To provide students in the Automotive Service Technology program the necessary skills that will enable them to be successful automotive repair technicians.

To provide educational opportunities to non-traditional students equivalent to that offered to traditional students.

To provide advisement and counseling to the students in order to help them achieve their career goals.

To maintain a high level of faculty expertise through faculty development seminars and training sessions.

To maintain a close relationships with the auto service industry to verify curriculum and enhance graduate placement opportunities.

Outcomes:

Graduates of the Automotive Service Technology program will continue to be in high demand by industry.

Graduates of the Automotive Service Technology program will have the skills for employment in the automotive service industry.

Graduates of the Automotive Service Technology program will be educationally prepared to continue their education if they desire.

The Automotive Service Technology program will continue to be a national leader in the preparation of technicians and manager for the automotive service repair industry.

The Automotive Service Technology program will continue to cooperate with industry to provide corporate sponsored technician-training programs and we will strive to expand these operations.

The Automotive Service Technology program will continue to enhance its positions as a model and a resource for other programs of this type.

B. How is the program compatible with the role and mission statement of FSU?

The mission of the Automotive Service Technology program is to prepare students for employment in the Auto Service repair field and to be participate members of society.

The program is very compatible with the role and mission of the University. With three large manufactures both sponsoring and employing our

auto service program graduates demonstrates a very direct career path for our students.

C. How is the program integrated/coordinated with other programs at FSU?

The mission of the College of Technology is to educate students in a spectrum of technical programs critical to Michigan's economic future and to provide technical support to business and industry through the Technology Transfer Center (TTC). This curricula spectrum of engineering, engineering technology, technology management, and technical specialty programming integrates with a foundation of knowledge required to cope with advancing technology within their professional careers.

The College of Technology is committed to providing its diverse student body with strong technical curricula emphasizing practical, usable skills that prepare the graduate to analyze, synthesize and problem-solve within their discipline. This is accomplished in an environment, which is one of respect for our students and their field of study. Students are perceived as being customers who have enrolled in programs to become employable and prepared for advancement in their chosen careers after graduation.

The college takes this trust seriously and provides curriculum-laddering options for two-year A.A.S. degree program graduates to transfer into four-year B.S. degree programs.

Goals

1. Provide A.A.S. and B.S. graduates the skills and knowledge to be employable and advance within their field of study and improve their education options after graduation.

2. Serve the part-time student through outreach activities such as those offered at the Applied Technology Center (ATC).

3. Provide experience and application to support lecture/lab-based instruction through interning and co-op activities, plus senior capstone courses in each academic program.

4. Develop a sense of professionalism within the student by encouraging professional student association activities within the student's chosen field of study.

5. Provide applied research for business, industry, and faculty development projects via Technology Transfer Credit (TTC) activities. Such activities would include training, product development, manufacturing process improvements, and prototype development.

Purposes

1. Follow-up studies of graduates one year, three years, five years, and eight years after graduation will measure graduates' employment and educational achievements.

2. Part-time student enrollment and program options at the Applied Technology Center will reflect the education and training needs of greater metro Grand Rapids.

3. Student interning and co-op options will satisfy the programmatic needs of the academic programs.

4. Senior capstone courses will utilize the knowledge base learned in the degree program solving skills relevant to the industry-related discipline. The program advisory committees and sponsoring industries will be involved in project evaluation.

5. Student membership in disciple-related student professional associations will be expanded through industry sponsorship and student/faculty involvement.

6. The Technology Transfer Credit (TTC) will expand by involving

faculty and students in such items as technical training, product and process development, and prototyping activities of the College of Technology.

D. How is the program integrated/coordinated with other programs at other institutions?

Our program is an associate degree program. All general education requirements for our program are supplied by many other departments such as math, English, etc. Having an associate degree allows for transfer students from other colleges to receive credit both in general education and the major program area. The auto service program is set up as the first two years of the Automotive and Heavy Equipment Management and Automotive Engineering Technology Bachelor degree's. This allows other colleges to transfer students straight into the Bachelor degree programs.

There are only so many corporate programs allowed by the manufactures in each state. For example, Ferris has one of the two Chrysler programs in the state of Michigan.

E. How does the program serve society at the community, state, nation, and world?

History

The Automotive Service Technology program started in 1952 in a wing of the Trade and Industrial center on the Ferris State University campus. When the program began, it occupied approximately 10,600 sq. ft. There was on faculty member and twenty students. The Automotive Service Technology Program was the parent program for all the other programs in the Automotive department.

Facilities

Presently the Automotive Service Technology program occupies approximately 57,000 sq. ft. in the Automotive Center building. This facility had a major remodel in 1988 to better accommodate the automotive programs.

One of the major features of the Automotive Service Technology program at Ferris State University is the service floor operation. This 13,300 sq. ft. service shop is designed to operate much like a dealership service department.

Service customers mainly provide the vehicles that are worked on in this course and the work is done by automotive students and supervised by the faculty.

Staff

The Automotive Service Technology program has a staff of 12 full-time faculty members, all with extensive industry background and teaching experience. The entire faculty has a baccalaureate degree and many have advanced degrees addition, each faculty member receives 20 to 40 hours of additional technical training each year. In addition to the teaching faculty, we have a support technician for the automotive department who repairs equipment and helps develop training aides.

Students

There are approximately 160 to 180 full-time students in the Automotive Service Technology program at any time in the normal school year. Student can enter the program fall and winter semesters. 50 students graduate annually. The majority of the students come from Michigan, but there are students from several other states and even from other countries.

Education

The education that is provided in the Automotive Service Technology program is representative of the high technology level that is demanded by the automotive service industry. The students are trained in the use of the latest diagnostic equipment and repair tools. They are instructed in the fundamental skills that are needed to use the high technology equipment. They receive both theory education and hands-on application. The Automotive Service Technology program is constantly being upgraded to meet the needs of industry both in the areas of education and equipment. There are options within the Automotive Service program that allow the students to take manufacturer specific courses and participate in dealership sponsored work experience. The General Motors sponsored program is called ASEP, the Ford sponsored program is ASSET and the Chrysler sponsored program is CAP. Other divisions of Ferris State University provide the important elements of the student's education such as mathematics and English. The Automotive Service Technology program has a dynamic and highly qualified advisory committee, which provides input on an ongoing basis concerning the operation of the program.

Job Opportunities

There is a very high demand for graduates of the Automotive Service Technology program. Most of the students have several jobs offers on completion of the program.

The typical job for a graduate would be performing repairs on late model automobiles in a medium to large dealership service department or major repair facility. The pay is excellent, with starting salaries in the $20,000 to $60,000 and

there is room for advancement. Many of the graduates of the Automotive Service Technology program elect to continue their education and pursue a Baccalaureate degree in Automotive and Heavy Equipment Management, Teacher Education. Automotive Engineering Technology or some other field.

Scholarships

In addition to the normal academic and financial need scholarships, the Automotive Service Industry Association, the Specialty Equipment Market Association, and the Felpro Corporation have scholarships available to qualified students.

Budget and Revenue

The general fund-operating (S&E) budget for the program has not increased over the past five years. We have been fortunate to obtain major donations of vehicles, training materials, equipment, and cash from Ford, General Motors, Chrysler, alumni, and various other sources. These donations enable us to continue to operate one of the most highly respected post-secondary automotive service programs in the nation. Our enrollment has gone 129-195 that is a 51% increase in enrollment.

Enrollment Trends

Generally, we try to start 80 students every fall. As you can see from the chart, we have average starting 78 students every year for the last 8 years. The Automotive Service program enrollment has gone from 129 in 1996 to 160 in 2001. The average enrollment for the last five years has been 162. Starting 78 to 80 students, every year would come to about 160 students. However, this does not take into consideration the attrition rate of about 10 to 15% per year. We loose

around 10 to 15 students each year for various different reasons. As a result are enrollment would be around 140 students. However, with internal transfers from other programs and with winter starting students along with students that may take 2 ½ to 3 years to graduate the number goes back up to around 160. Our enrollment numbers are stable at 160 on average. In the year 2000, the Automotive Service enrollment went from 162 to 183. The increase in enrollment was caused by students staying in the Automotive Service program and waiting for the new Automotive Engineering Technology degree to be implemented. At this time, the AET designator was not in place however; all of the junior year classes were in place. In 2001, the students did program changes and 37 new AET students showed up. While, Automotive Service enrollment returned to 158 the total increase from 1999 to 2001 is from 162 to 195 for a total increase between two programs of 33 new students. The classes taught in the Automotive Engineering Technology program have auto designators and are taught by the auto service faculty. With the start of the second year of the Automotive Engineering Technology program, we have already registered 26 new AET students. This will bring the total number of Auto students to 220 this almost doubles the size without any increase in faculty or S&E budget.

We expect the new AET program to attract both incoming freshmen to the Automotive Service program and juniors to the Automotive Engineering Technology program. If we increase five to ten new freshmen because of the AET program over a four-year program period, we would increase 20 to 40 new students. In addition, with attracting five to ten new juniors to the AET program,

we would be looking at another 10 to 20 more students for the Automotive Service faculty-teaching unit. The outlook for growth caused by these two programs is from 30 to 60 new students over the next two to four years. With the enrollment at 314 students for the year 2001 and with a projected enrollment of 330 to 340 for the department for the fall of 2002 there has been a steady increase since 1996. With the projected enrollment increase over the next four years from 30 to 60 students the departments enrollment with be some where around 360 to 390.

Future Trends

Closer ties with the major auto manufactures will be the key to the future of the Automotive Service Technology programs. We are also planning on increasing the number of students that will be doing industry sponsored co-ops and internships. We also plan to increase our level of faculty development activities. If enrollments continue to increase, we will have to consider hiring additional faculty. The load (faculty teaching) has gone from 129 to 195 in 2001 because of the new Automotive Engineering Technology program. In fact, already many new students have been attracted to the Automotive Service program for the fall of 2002. If 10 or more freshmen are added per year this will cause an increase from 40 to 60 students that are new.

With the Auto Service program going from 129 to 195 in 2001 and with 40 to 60 new freshmen attracted because of the Automotive Engineering Technology program. The Auto programs enrollment will go to 240 – 260. With the highest number of overloads in the College of Technology and with a clear and proven new cohort of students there is a need to add a faculty position.

II. Resources of the program:

The majority of our resources come from industry except for our salaries.

A. Personnel:

1. Faculty: List by rank with degrees (including year, field of study, and institution), certificates, and/or related work experience.

a. Tenure-Track – 12 Automotive Service Faculty:

1) Peter Alley, CAP Coordinator/Associate Professor
Master of Science Degree, Occupational Education, FSU, 1992
Bachelors of Science Degree, Trade Technical Education, FSU, 1976
Associates of Applied Science Degree, Automotive Technology, FSU, 1969

2) Rexford Billings, Associate Professor
Master of Science Degree, Occupational Education, FSU, 1988
Bachelors of Science Degree, Trade Technical Education, FSU, 1981
Associate Degree, Automotive Service Technology, MCC, 1979
Industrial Electronics Technology, EET 114 DC Circuits, FSU

3) Charles Bonning, Professor
Master Degree, Technical Education, MSU, 1980
Bachelor of Science Degree, Technical Education, FSU, 1978
Associates Degree, Automotive Service, FSU, 1976
Associates Degree, Printing, FSU, 1976

4) Michael Hachman, Professor
Master Degree, MSU 1986
Bachelors of Science Degree, Trade Technical Education, FSU, 1971
Associate Degree, Automotive Service, FSU, 1969
Certificate, Automotive Machine, FSU, 1971-1972

5) Greg Key, Department Chair/Professor
Master of Science, Industrial Technology Manufacturing, EMU, 1986
Bachelor of Science, Industrial Education, WMU, 1978

6) Jimmie Norrgton, ASEP Coordinator/Professor
Bachelor of Science, Trade Technical Education, FSU, 1973
Associate Degree, Automotive Service Technology, FSU 1973
Certificate, Automotive Machine, FSU, 1967

7) Daniel Skurski, Assistant Professor

Bachelor of Science, Automotive Technology, ISU, 1978
Minor: Business Administration

8) Ronald Tuuri, Professor
Master of Science Degree, Vocational Education, UW-Stout, 1984
Bachelor of Science, Vocational Education, UW-Stout, 1977

9) Ben Upham, Assistant Professor
Bachelor of Science, Technical Education, FSU, 1992
Associate Degree, Automotive Technology, FSU, 1987

10) Bill Wagner, Assistant Professor
Bachelor of Science Degree, Teacher Education, FSU, 1978
Associate in Applied Science Degree, FSU, 1972

VITAW for each faculty member see Attachment A.

b. Adjunct - None

c. Temporary - None

2. **FTE overloads**

3. **Off-campus programs: location and involvement of faculty.**

4. **Administration: degrees (including year, field of study, and institution), certificates, and/or related work experience.**

5. **Support staff (clerical, technical...)**

2 Account Clerks, 1 Secretary, 1 Equipment Repair Technician

6. **Student assistants.**

7 student workers on work-study

7. **Advisory Committee: Names, affiliations, and positions of the membership.**

B. Instructional resources:

1. **Describe, in general, the facilities (classroom, lab, clinic, etc.) and equipment available to the program.**

   The Automotive Center houses 10 Auto Service labs, 6 Auto Service classrooms, a Service Floor, Parts Crib, Parts Storage, Equipment Repair Room, Administrative Offices, a Manual Reference and Video Room, Automotive and Heavy Equipment Management Offices as well as the Automotive Body Labs. See Attachment D.

2. **Supplies and expense budge.**

   $30,000.00

3. **Equipment Acquisition Budget**

   Voc Ed/One Time Money

Appendix F

EVALUATION PLAN FORMAT

Program: Automotive Service Technology

Program Review Panel:

Chair: Greg Key, Department Chair
Advisory Committee Member: Donald Walcheski
Faculty: Pete Alley, Ben Upham, Rex Billings
Tom Brownell

Purpose:

To conduct a study of the Automotive Service Technology program to evaluate its needs and effectiveness, so the university can make an informed decision about the program.

Data Collection Techniques and Information Sources:

A. **Graduate Follow-up Survey:** Will use College of Technology Graduate Survey.

B. **Employer Survey:** Will survey our employers.

C. **Student Evaluation:** Will be done in the winter 2001/2002 using a survey.

D. **Faculty Perceptions of the Program**: Will be done by a questionnaire in the fall of 2001.

E. **Advisory Committee Perceptions of the Program:** Will be done by a questionnaire to the Advisory Committee Members, winter 2002.

F. **Labor Market Analysis**: Will use MOIS.

G. **Evaluation of Facilities and Equipment**: Will be done by reviewing the Automotive Center equipment, library, and computer resources.

H. **Curriculum Evaluation:** Will be done with a survey by the Automotive Service Technology Curriculum Committee.

Appendix F (Continued)

Schedule of Events

Activity	Leader	Target Dates
Graduate Follow Up Survey	Ben Upham	February 30, 2002
Employer Follow Up Survey	Pete Alley	February 30, 2002
Student Evaluation of Instruction	Ben Upham	February 30, 2002
Faculty Perceptions	Kathy Myers	February 30, 2002
Advisory Committee Perceptions	Pete Alley	February 30, 2002
Labor Market Demand Analysis	Ben Upham	February 30, 2002
Evaluation of Facilities & Equipment	Rex Billings	February 30, 2002
Curriculum Review	Pete Alley Rex Billings Chuck Bonning	February 30, 2002
Enrollment Trends	Greg Key	February 30, 2002
Program Productivity Costs	Greg Key	February 30, 2002
Conclusions & Recommendations	Greg Key	February 30, 2002
Appendix	Greg Key	February 30, 2002

_____

Signature of the Chair

AUTOMOTIVE DEPARTMENT
MEMORANDUM

TO:

FROM: Greg Key, Department Chair

SUBJECT: Proposed Budget for the Automotive Service Technology Program Review

DATE: 11/5/01

We are submitting this proposed budget for the Automotive Service Technology program review.

Student, advisory committee and faculty survey		$ 294.00
Printing, copying, and mailing costs		$ 304.00
Student wages	(30 hrs @ $5.75 per hr.)	$ 172.50
Final document production		$ 229.50
Total		$ 1,000.00

PETER ALLEY

VITAE

PROFESSIONAL EDUCATION

Master of Science Degree Occupational Education	Ferris State University	1992
Bachelors of Science Degree Trade Technical Education	Ferris State University	1976
Associates of Applied Science Degree Automotive Technology	Ferris State University	1969

TECHNICAL/LEADERSHIP EDUCATION

Army Officers Advance Course
Initial Entry Helicopter Pilot Training
Army Officer Basic Course
OH58 Helicopter Mechanic
Mobil Power Generator Mechanic/Operator
Basic Combat Training

INDUSTRY AND TEACHING EXPERIENCE

Ferris State University Big Rapids, MI 1977 to present

- Associate Professor Automotive Technology
  Course Taught: Service Area, Engines, Chassis Electrical, Engine Electrical, and Air Conditioning.
- CAP Coordinator

ST Johns Public School ST Johns, MI 1973 to 1977

- Vocational Automotive Instructor
- VICA Instructor

University Oldsmobile Lansing, MI 1969 to 1973

- Automobile Technician/Shop Foreman
  Supervised the work flow and approximately 10 technicians

FERRIS STATE UNIVERSITY SUMMARY

During my tenure at Ferris I have served as a board member to the executive board of the FFA, a representative to the RFAC (Representative Faculty Advisory Council), a charter member of the Ferris Academic Senate, represented the Auto Program on the Ferris Centennial Committee, Chaired the Auto Body Curriculum Review Committee, served on the College of Technology Recruiting Committee, and Automotive Department Recruiting Committee chair. Contributions to the Automotive and Heavy Equipment Department include but are not limited to being assigned the lead instructor in the brake, alignment and suspension area, major curriculum review and reviewing of the course material for these two areas including the development of two lecture lab guides sold in the bookstore to assist students in the learning process. I also served on the department semester transition committee and the Tech Prep (high school articulation) committee, which lead to the first articulation agreement for the department. Have maintained industry contacts, which resulted in a Coordinator for three years, which involved supervising interims, recruiting students, and maintain industry contacts.

FERRIS EXPERIENCE

FFA Executive Board Member
RFAC College of Technology Representative
Ferris Academic Senator College of Technology
College of Technology Recruiting Committee
Auto Body Curriculum Review Committee
CAP Coordinator
Daimler Chrysler College Automotive Committee

PROFESSIONAL ASSOCIATIONS

ASE (Automotive Service Excellence) Certified Master Automotive Service Technician

TRAINING HISTORY

NUMBER		COURSE NAME	DATE	TC	LOC	HRS
ASEAUT01		AUTO: ENGINE REPAIR	06/30/98			
ASEAUT02		AUTO: AUTOMATIC TRANS/TRANSAXLE	06/30/98			
ASEAUT03		AUTO: MANUAL DRIVETRAIN & AXLES	06/30/98			
ASEAUT04		AUTO: SUSPENSION & STEERING	06/30/98			
ASEAUT05		AUTO: BRAKES	06/30/98			
ASEAUT06		AUTO: ELECTRICAL SYSTEMS	06/30/98			
ASEAUT07		AUTO: HEATING & AIR CONDITIONING	06/30/98			
ASEAUT08		AUTO: ENGINE PERFORMANCE	06/30/98			
50396.13		PONTIAC NEW MODEL FEATURES PULSAT TELECAST.	02/08/96	99	IV	2
18001.11		ADVANCED ELECTRONICS STRATEGY BASED DIAGNOSTI	12/19/95	01	M	24
50395.03		LUMINA / MONTE CARLO NEW MODEL FEATURES - CHE	03/16/95	99	00	2
50395.00		1995 NEW MODEL FEATURES PULSAT TELECAST	03/06/95	99	00	4
50395.01		1995 RIVIERA NEW MODEL FEATURES - PULSAT TELE	03/06/95	99	00	4
55205.10		DELCO MORAINE ABS VI WITH TRACTION CONTROL	01/20/95	99	00	2
17002.04		4T60/4T60E 4-SPEED AUTOMATIC TRANSAXLE	08/01/94	01	M	32
50394.21		CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLE	05/23/94	99	00	4
50394.20		CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLE	05/20/94	99	00	4
50394.23		CONFIDENCE 94 NEW MODEL FEATURES FOR PONTIAC	05/18/94	99	00	4
50394.25		CONFIDENCE 94 NEW MODEL FEATURES FOR BUICK CA	05/10/94	99	00	4
50394.28		CONFIDENCE 94 TELECAST FOR CADILLAC CARS	05/03/94	99	00	4
13003.03		CADILLAC CHASSIS ELECTRONIC SYSTEMS	04/06/94	01	00	8
46009.10		FUEL INJECTION EFI/PFI - TEST-OUT	03/31/94	01	00	2
16014.11		4.0L/4.6L ENGINE MECHANICAL	02/09/94	01	00	16
14003.04		ALL WHEEL DRIVE/FOUR WHEEL [illegible]	02/07/94	01	00	16
55205		DELCO MORAINE ABS 6 - ESB	11/30/93	99	00	2
53404...		SPEED DEPENDENT DAMPING	11/26/93	99	00	2
53404.00	(INC)	SPEED DEPENDENT DAMPING	10/22/93	99	00	2
55205.05		DELCO MORAINE ABS VI	10/12/93	99	00	2
55205.04		TEVES MARK IV ANTILOCK BRAKE SYSTEM	10/08/93	99	00	2
55205.03		BOSCH ABS III WITH TRACTION CONTROL	10/02/93	99	00	2
55205.09	(INC)	DELCO MORAINE ABS 6 - ESB	09/28/93	99	00	2
13003.02		BOSCH 2U/5 ABS/TCS	05/06/93	09	00	8
15005.08		BOSCH 2U & 2S ABS	05/05/93	09	00	8
15005.05		FOUR WHEEL ANTILOCK BRAKES (4WAL)	05/04/93	09	00	8
13002.02		VIBRATION CORRECTION	02/23/93	38	C	16
18005.06		APPLIED AUTOMOTIVE ELECTRONICS	11/19/91	01	M	16
10392.00		1992 MODEL NEW FEATURES	10/04/91	01	00	8
66009.19		4.3L CENTRAL PORT FUEL INJECTION	10/03/91	01	00	8
15005.04		DELCO MORAINE III ANTILOCK BRAKE SYSTEM - 198	04/17/91	38	00	8
15005.05		FOUR WHEEL ANTILOCK BRAKES (4WAL)	04/16/91	38	00	8
16009.10		FUEL INJECTION EFI/PFI	03/12/91	38	00	16
13003.00		SUSPENSION, ALIGNMENT AND WHEEL BALANCE	10/25/90	01	00	16
15005.07		TEVES II ABS	06/19/90	01	00	8
13002.01		VIBRATION DIAGNOSIS AND REPAIR	06/18/90	01	00	8
19007.02		WINDSHIELD WIPER & WASHER SYSTEMS	05/18/90	38	M	8
11004.01		AIR CONDITIONING COMPRESSOR SERVICE	05/17/90	38	M	8
16009.11		FUEL INJECTION DRIVEABILITY	05/16/90	38	M	8
15005.04		DELCO MORAINE III ANTILOCK BRAKE SYSTEM - 198	10/21/88	02	00	8
16018.10		TECH 1 FAMILIARIZATION	10/20/88	02	00	8
15005.02		TEVES ELECTRONIC BRAKE CONTROL	03/04/88	38	00	8
18001.02		SPECIALIZED ELECTRONICS TRAINING	10/21/86	01	Z	2

TRAINING CENTER CLASSES CURRENT YTD HOURS: 0
TRAINING CENTER PREV 3 YRS AND CURR HOURS: 96
CPT CURRENT YTD HOURS: 2
CPT PREV 3 YRS AND CURRENT HOURS

REXFORD D. BILLINGS

VITAE

EDUCATION:

Masters Degree in Occupational Education
Ferris State University; Big Rapids, Michigan
1988

Bachelor of Science in Trade-Technical Education
Ferris State University, Big Rapids, Michigan
1981

Associate Degree, Automotive Service Technology
Montcalm Community College, Sidney, Michigan
1979

Industrial Electronics Technology courses
Ferris State University, Big Rapids Michigan
EET 114 DC Circuits

WORK EXPERIENCE:

Summer 1987	**Automotive Technician** Art Springsteen's Sons, Inc., Dowagiac, Michigan
One year	**Automotive Technician** Bookwalter, Motor Sales, Stanton, Michigan.
Summer 1979	**Automotive Technician** Beardslee Oldsmobile, Sheridan, Michigan.

TEACHING EXPERIENCE:

1988 to Present	Associate Professor Ferris State University, Big Rapids, Michigan, Areas of concentration: 1. AUTO 117 Electronic Fuel Management Systems 2. AUTO 116 Engine Electrical 3. AUTO 113 Basic Electricity/Electronics 4. AUTO 200 and 250 Auto Service Floor 5. AUTO 213 Chassis Electrical & Electronics
8/1983 to 5/1988	Full-time Automotive Instructor Southwestern Michigan College, Dowagiac, Michigan
9/1987 to 8/1988	Certified General Motors Michigan Affiliation Program Instructor. Southwestern Michigan College Taught the following aftermarket courses: 1. GM SET 18.001.02 2. CCC Fundamentals 16016.05 3. CCC Advanced 16016.06 4. EFI/Emissions 16020.00/16004.00 5. EFI 16009.02
6/1983	Taught Automatic Transmission Course Kent Skills Center, Grand Rapids, Michigan
9/1981 to 6/1983	Industrial Maintenance Instructor Montcalm Area Career Center, Sidney, Michigan
9/19/81 to 12/19/81	Small Engine Instructor Montcalm Community College, Sidney, Michigan
5/80 to 8/80	Taught Steering and Suspension Systems Montcalm Community College, Sidney, Michigan

COMMITTEE PARTICIPATION:

Technician of the Future Day Planning Committee
Recruiting Committee
Academic Senate 1992-93
Outcomes Assessment Council 1994-95
College of Technology Curriculum Committee 1990-92
Auto Service Tool and Equipment Committee 1993-94
College of Technology Promotion Committee 9/1995-2/1997

PRESENTATIONS:

Summer 1995	Electronic Fuel Systems and Active Suspension Systems presented to Sealed Power Corporation
March 1992	"Back to the Future" Technology and Industry Conference
November 14, 1989	Trends Conference on Occupational Studies entitled Specialized Electronics Fundamentals Training to Michigan Community College Educators
Summer 1988	Specialized Electronics Training Fundamentals to Ferris Automotive Faculty

OTHER:

Master ASE Certified Technician 1990-present
L1 Advanced Engine Performance ASE - 1999-present
Administering the Michigan Occupational Competency Assessment Center (MOCAC) Exam 1988-present
Supervised students at State and National VICA competition. 9/95-present
Attended Chrysler OBDII Training-9/96
Attended Ford New Generation Star Training, and Service Bay Diagnostic Training Summer 1995

General Motors Training History

Course Number	Course Name	Course Date	Course Hours
	Facilitation for GM ASEP/BSEP	06/18/01	32
10040.00W	SI-2000 Overview	07/05/01	2
16044.10W1	GM Powertrain Performance Part 1	03/07/01	3
16044.10W2	GM Powertrain Performance Part 2	03/09/01	3
16044.10W3	GM Powertrain Performance Part 3	01/01/01	3
16044.10D1	GM Powertrain Performance Part 1	03/14/00	3
16044.10D2	GM Powertrain Performance Part 2	03/14/00	3
16044.10D3	GM Powertrain Performance Part 3	01/01/01	3
19047.03W1	Entertainment Systems	02/20/01	4
19047.03W2	Entertainment Systems	02/20/01	4
16046.10W	6.5 L Diesel Engine	01/01/01	4
16040.10V	Engine Performance Issues	12/07/00	1
13042.10D1	Vibration Correction- Part 1	03/15/00	2
13042.10D2	Vibration Correction- Part 2	03/15/00	2
13042.10W	Vibration Correction	03/15/00	4
16048.15W	Tech 2 Familiarization	03/15/00	4
17041.20D1	Automatic Transmission Diagnostics Part 1	03/15/00	2
17041.20D2	Automatic Transmission Diagnostics Part 2	03/15/00	2
17041.20W	Automatic Transmission Diagnostics	03/15/00	4
15045.20D	Bosch Series 5 ABS/TCS	03/14/00	2
16041.01D	Battery, Charging, & Starting	03/14/00	2
16041.01W	Battery, Charging, & Starting	03/14/00	4
16043.40D1	Engine Mechanical Diagnosis/Meas.- Part 1	03/14/00	2
16043.40D2	Engine Mechanical Diagnosis/Meas.- Part 2	03/1[illegible]	[illegible]
16043.40W	Engine Mechanical Diagnosis/Meas.	03/14/[illegible]	[illegible]
16045.20D1	Diesel Engine Performance – Part 1	03/14/00	3
16045.20D2	Diesel Engine Performance – Part 2	03/14/00	3
18043.01W	Electrical/Electronics Stage 1	03/14/00	4
18043.02W	Electrical/Electronics Stage 2	03/14/00	4
18043.03W	Electrical/Electronics Stage 3	03/13/00	4
13043.10W	Chassis Electronics	03/13/00	4
15045.30D	4 WAL ABS	03/13/00	2
15045.30W	4 WAL ABS	03/13/00	4
16040.02W	OBD II	03/13/00	4
19047.06W	Security Systems	01/01/00	4
16045.20W	Diesel Engine Performance	03/14/00	4
13043.10D1	Chassis Electronics – Part 1	03/13/00	2
13043.10D2	Chassis Electronics – Part 2	03/13/00	2
19047.03D	Entertainment Systems	01/01/00	2
56500.00	3100 SFI Oldsmobile Version	12/13/99	2
56030.02	1998 OBD II and Fuel Injection	12/13/99	2
56002.00	Central SFI for Trucks	12/13/99	2
56015.00	On Board Diagnostics II	12/13/99	2
56012.01	F-Car 5.7L (LS1) Powertrain Controls CPT	12/13/99	2
56012.00	Corvette 5.7L Gen III Powertrain Controls	12/13/99	2
56010.00	Service Programming System	12/13/99	3
58001.00	U-Van Power Sliding Door CPT	11/11/99	2
18003.15	Body Controller Systems	10/19/99	2
16009.20	Gen III V8 Powertrain Controls	06/23/99	2
16009.10	GM Fuel Injection Diagnosis	06/10/99	2

56030.02	1998 OBD II and Fuel Injection	03/09/99	2
16018.05	GM Diagnostic and Information Terminals	08/18/98	8
16015.25	6.5L Diesel OBD II	05/28/98	16
18003.14	Intermittent Electrical Concerns Diagnosis	05/27/98	8
56015.15	OBD II History & 1996 Features	05/07/98	2
56015.10	On-Board Diagnostic Gen II History & 1995 Fe.	05/05/98	2
59407.06	GM Security Systems CPT	04/30/98	2
59407.05	Venture Content Theft Deterrent (U-Van)	04/24/98	2
52208.11	Inflatable Restraint System	04/21/98	2
59407.04	Personalized Automotive Security System III	04/17/98	2
59407.02	Chevrolet Security Systems	04/13/98	2
56002.00	Central SFI for Trucks	02/16/98	2
19007.03	GM Audio Systems	12/17/97	16
16797.00	Driveability Seminar – Current Concerns	08/07/97	8
18001.19	Corvette Electrical/Electronics	08/05/97	16
10016.00	Introduction to Electronic Service Information	07/25/97	8
46018.01	Techline Diagnostic & Information Terminals	06/13/97	2
16018.15	Tech 2 Familiarization	08/16/96	8
16030.02	On-Board Diagnostics Generation II	08/13/96	24
50396.11	Oldsmobile New Model Features Pulsat Telecast	02/29/96	2
50396.10	Cadillac New Model Features Pulsat Telecast	02/29/96	2
50396.23	GMC Truck New Model Features Pulsat Telecast	02/29/96	2
50396.20	Chevrolet Car and Truck New Features Pulsat Tel.	02/29/96	2
50396.13	Pontiac New Model Features Pulsat Telecast	02/23/96	2
18001.11	Electronics Strategy Based Diagnostics	12/19/95	24
51010.15	134A Retrofit for GM Cars and Trucks	04/27/95	2
50395.03	Lumina/Monte Carlo New Model Features-CHE	03/16/95	2
50395.00	1995 New Model Features Pulsat Telecast	03/07/95	4
50395.01	1995 Riviera New Model Features – Pulsat Tele.	03/06/95	4
16030.00	On-Board Diagnostics G[illegible]wo for 1995	02/09/95	16
16004.10	Vehicle Emissions, Enh[illegible]g, and Diag.	12/15/94	16

Diamler/Chrysler Training History

Course Number	Course Name	Course Date	Course Hours
SP40332	Viper Technical Training	12/15/98	40
0630108	Passive Restraints	10/16/98	8
0850108	OBD II Update	07/28/98	8
0830116	4 Cyl Fuel Injection	07/30/97	16
SP30308	DRB III Usage	07/22/97	8
0840216	JTEC 2.5 & 4.0 Liter Fuel Injection	12/12/96	16
0830516	OBD II	08/30/96	8

Ford Training History

Course Code	Course Name	Course Date	Course Hours
30S04T0	World Diagnostic System Introduction	02/09/01	16
FMT	Essential of Driveability Diagnosis	12/12/95	2
FMT	Exhaust and Emission System	02/13/96	2
FMT	Basic Electrical Part 1	10/16/98	2
FMT	Fuel and Air Inlet Theory and Operation	01/12/96	2
FMT	Exhaust and Emission System Diagnosis and Ana.	01/12/96	2
FMT	Ignition System Theory and Operation	01/03/96	2

Other Training

Location	Course Name	Course Date	Course Hrs.
Lansing Community College	NGV-1 Compressed Natural Gas	01/10-12/2001	24

CHARLES BONNING

VITAE

EDUCATION

Masters Degree, Technical Education, Michigan State University, 1986

Bachelor of Science Degree, Technical Education, Ferris State University, 1978

Associates Degree, Automotive Service, Ferris State University, 1976

Associates Degree, Printing, Ferris State University, 1976

WORK EXPERIENCE

Orion Enterprises; Lake Orion, Michigan; Auto Mechanic; 1967-1970

TEACHING EXPERIENCE

Kent Skills Center; Grand Rapids, Michigan; Auto Mechanics Instructor; 1997-19978

Baldwin High Schoo., ..., Michigan; Automotive Service Instructor; 1979-1980

Ferris State University; Big Rapids, Michigan; Automotive Service Instructor, 1980 to present

RECENT WORKSHOPS/COURSES

- Delco Electronics
- IBM S/36 Computer
- Delco TBI Training
- TRW Electronic
- EET 114 DC Circuits
- 18001.02 Specialized Electronics Training-Certified, 5/26/89
- Intel DVI Technology, CIET Systems Inc. Authorlogy

RECENT WORKSHOPS/COURSES CONTINUED

- #11005.10 A/C System Controls, 6/27/89
- #16009.02 EFI, 4/9/86
- #16016.05 Computer Command Control, 4/8/86
- #18001.02 GMSET, 5/26/89
- #18001.90 Specialized Electronics, 5/17/89
- #18001.91 Specialized Electronics, 5/19/89
- #18001.92 Specialized Electronics, 5/23/89
- #18001.93 Specialized Electronics, 5/25/89
- #16009.11Engine Performance, 1990
- #16003.01 Driveability Diagnosis, 1990
- EET-114 DC Circuits, 1990
- EET-125 AC Circuits, 1990
- EET-135 Digital Logic, 1990
- # 19006.00 Cruise Control, 12/17/91
- #16018.10 Tech I Familiarization, 9/91
- #16790.11 Driveability 1/31/91
- #16790.12 Driveability 1/31/91
- #15005.08 Bosch ABS, 1/24/91

TRAINING HISTORY

REPORT ID: SERRRR35 GENERAL MOTORS TRAINING CENTER 09:57 11/01/96
SORT - COURSE DATE TRAINING HISTORY FOR: PAGE 1
W. C. BONNING
SELECT: P 375-54-9805
FERRIS STATE UNIVERSITY / J. NORRINGTON (A002865)

NUMBER	COURSE NAME	DATE	TC	LOC	HRS
ASEAUT01	AUTO: ENGINE REPAIR	06/30/97			
ASEAUT02	AUTO: AUTOMATIC TRANS/TRANSAXLE	06/30/97			
ASEAUT03	AUTO: MANUAL DRIVETRAIN & AXLES	06/30/97			
ASEAUT04	AUTO: SUSPENSION & STEERING	06/30/97			
ASEAUT05	AUTO: BRAKES	06/30/97			
ASEAUT06	AUTO: ELECTRICAL SYSTEMS	06/30/97			
ASEAUT08	AUTO: ENGINE PERFORMANCE	06/30/97			
16018.15	TECH 2 FAMILIARIZATION	08/16/96	01	M	8
11005.25	HVAC SYSTEM DIAGNOSIS	11/28/95	38	00	24
16030.02	ON BOARD DIAGNOSTICS GENERATION II	09/20/95	38	C	24
16015.20	6.5L DIESEL EPI/MECHANICAL	04/12/95	38	00	24
50395.03	LUMINA / MONTE CARLO NEW MODEL FEATURES - CHE	03/16/95	99	00	2
50395.01	1995 RIVIERA NEW MODEL FEATURES - PULSAT TELE	03/08/95	99	00	4
50395.00	1995 NEW MODEL FEATURES PULSAT TELECAST	03/06/95	99	00	4
11005.18	DUAL ZONE A/C CONTROLS	02/23/95	38	C	8
16004.10	VEHICLE EMISSIONS, ENHANCED TESTING, AND DIAG	01/09/95	38	00	16
50394.20	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLE	05/20/94	99	00	4
50394.23	CONFIDENCE 94 NEW MODEL FEATURES FOR PONTIAC	05/18/94	99	00	4
50394.25	CONFIDENCE 94 NEW MODEL FEATURES FOR BUICK CA	05/10/94	99	00	4
50394.28	CONFIDENCE 94 TELECAST FOR CADILLAC CARS	05/03/94	99	00	
16014.11	4.0L/4.6L ENGINE MECHANICAL	02/09/94	01	00	16
14003.04	ALL WHEEL DRIVE/FOUR WHEEL DRIVE SYSTEMS	02/07/94	01	00	16
56488.01	1988 QUAD 4 ENGINE MECHANICAL AND ELECTRONIC	11/23/93	99	00	4
56488.[illegible]	HIGH OUTPUT QUAD 4 ENGINE - MECHANICAL	11/18/93	99	00	2
56091	ZR1 LT5 ENGINE MECHNICAL	11/01/93	99	00	2
56490.00	3.4 LITER TWIN DUAL CAM ENGINE MECHANICAL	11/01/93	99	00	2
56014.05	4.1 /4.5 /4.9 LITER ENGINE MECHANICAL	10/30/93	99	00	2
56091.01	4.3 LITER ENGINE MECHANICAL (CPI)	10/12/93	99	00	2
16015.12	6.5L TURBOCHARGED DIESEL ENGINE	10/05/93	38	00	16
51205.01	BUICK "DUAL ZONE" CLIMATE CONTROLS	09/27/93	99	00	2
51010.00	R-134A AIR CONDITIONING REFRIGERANT	02/23/93	99	00	2
11004.00	INTRODUCTION TO A/C	10/13/92	38	C	16
10392.00	1992 MODEL NEW FEATURES	10/11/91	38	00	8
16020.05	DISTRIBUTORLESS IGNITION SYSTEMS	02/27/91	01	00	8
22008.15	BUICK, OLDS AND CADILLAC SUPPLEMENTAL INFLATA	02/25/91	01	00	8
18001.00	ELECTRICAL THEORY & BASIC CIRCUITRY	02/05/91	38	00	8
16790.11	DRIVEABILITY SEMINAR - 2.8/3.1/3.4 V6 ENGINES	01/31/91	01	00	4
16790.12	DRIVEABILITY SEMINAR - 3.0/3.8/3300/3800	01/31/91	01	00	4
15005.08	BOSCH 2U & 2S ABS	01/24/91	38	00	8
16018.10	TECH 1 FAMILIARIZATION	01/09/91	01	00	8
19006.00	CRUISE CONTROL	12/17/90	38	00	8
16003.01	ENGINE PERFORMANCE TESTING	06/21/90	01	00	16
16009.11	FUEL INJECTION DRIVEABILITY	06/20/90	01	00	8
11005.10	A/C CONTROLS - C60, C65, C67 AND C68 NON-BCM	06/27/89	01	00	16
18001.02	SPECIALIZED ELECTRONICS TRAINING	05/26/89	38	Z	2
16009.02	ELECTRONIC FUEL INJECTION	04/09/86	01	A	8
16016.05	COMPUTER COMMAND CONTROL - FUNDAMENTALS	04/08/86	01	A	8

MICHAEL HACHMAN

VITAE

EDUCATION

Master Degree, Michigan State University, 1986

Bachelor of Science, Trade-Technical Education, Ferris State University, 1971

A.A.S. Degree, Automotive Service, Ferris State University, 1969.

Certificate, Automotive Machine, Ferris State University, 1971-1972

WORK EXPERIENCE

Mechanic, Bollingers, Inc., Lakeview, Michigan 1970-71.
Service Manager, Bollingers, Inc., Lakeview, Michigan, 1971-72.

TEACHING EXPERIENCE

Ferris State University, Big Rapids, Michigan, 1972 to present.
Chrysler Apprentice Program Coordinator, Ferris State University, 1996 to 1999.

1. Engines
2. Automotive Machine Shop
3. Engine Electrical
4. Shop Practice
5. Materials of Industry
6. Electrical and Fuels
7. Service Management
8. Brakes and Suspensions
9. Manual Transmissions
10. CAP Coordinator
11. Performance Engine Machining
12. Service Floor

INDUSTRIAL COURSES:

AC Delco EFI, March, 1985
ASIA, March 1986
GM Tech Center, April, 1986
TRW, February 1987
Rockwell International, October 1987
Caterpillar, November, 1987
Allen Test Equipment, January 27, 1988
Fuel Injection and Driveability, GMC, May 16, 1990

13002.01 GM Drivelilne Vibration Diagnosis, June 18, 1990
GM Alternative Fuels, November 18, 1991
51010.00 GM R134A Air Conditioning Refrigerant, Feb. 17, 1993
Chrysler ABS-4 Anti-lock Brakes, December 15, 1994
Chrysler DRB III/OBD II, December 16, 1994
Chrysler DRB III Update, April 2, 1996
Chrysler - 97 Wrangler, April 1, 1996
Chrysler OBD II Update, April 19-20, 1996
Chrysler Updating, June 10-14, 1996
Chrysler Cummins Fuel, March 5, 1997
Chrysler Seminar, June 9-13, 1997
Chrysler Wiring, June 27, 1997
Chrysler DRB, July 22, 1997
Chrysler Fuel Inj., July 29-30, 1997
Chrysler Seminar, July 13-17, 1998
Chrysler OBD II, July 28, 1998
Chrysler 2.7 Engine, July 28, 1998
Chrysler Passive Restraints, October 16, 1998
Chrysler Viper, December 15-18, 1998
Chrysler MDS II, August 25, 1999
Chrysler Teves ABS, August 26, 1999
Chrysler RS/RG Body, May 2, 2001
Snap on Tools Update, May 2, 2001

Greg Key

VITAE

EDUCATION:

Master of Science, Eastern Michigan University, Industrial Technology Manufacturing, 1986.

Bachelor of Science, Western Michigan University, Kalamazoo, Michigan, Industrial Education, 1978.
Major: Power Automotive
Minor: General Industrial Education

EXPERIENCE:

DEPARTMENT CHAIR: -Automotive Department (Automotive Engineering Technology, Automotive and Heavy Equipment Management, Automotive Service, and Auto Body. Ferris State University, Big Rapids, MI. 1999

COORDINATOR: -Automotive Service And Auto Body programs Ferris State University, Big Rapids, MI. 1996.

PROFESSOR: -Transportation and Electronic Department, Ferris State University, Big Rapids, MI. 1994. I am currently employed to teach courses in the Auto Service Area.

ASSOCIATE PROFESSOR: -Automotive and Heavy Equipment Department, Ferris State University, Big Rapids, MI. from 1987 to 1994.

CHRYSLER TECHNICAL INSTRUCTOR: - Chrysler motor Division, Chrysler Corporation, Warren MI. 1986. I was hired to teach the Allen-Bradley Programmable controller to engineers and skilled trades personal in all the Manufacturing plants in the Corporation. With in six months I was promoted to Manufacturing Supervisor at the Warren Truck plant on Eight Mile road.

FIELD TECHNICAL INSTRUCTOR; - Allen-Bradley Electronic Corporation Milwaukee Wisconsin. I work out of the Detroit Sales office as a Field Technical Instructor. I offered courses to any corporation that had Allen-Bradley Programmable controllers and requested training. My major areas were the PLC-3 and PLC 2/30 during 1984-1986.

COLLEGE ELECTRONIC INSTRUCTOR: - Baker Junior College Flint, Michigan. 1983-1984. I taught most of the electronic courses in the program and I was the only person able to teach the programmable Controller course. Further, more I taught Calculus and some computer courses.

COLLEGE AUTOMOTIVE INSTRUCTOR/COORDINATOR: Carl Sandburg College, Galesburg, Illinois, 1980-1983. I was responsible for all automotive courses, all part time faculty, and their schedule. I was tenure after my third year at Carl Sandburg College.

COLLEGE AUTOMOTIVE INSTRUCTOR: - Mott Community College Flint, Michigan. I moved to Flint to teach at Mott Community College in the automotive department. The position was a year temporary position form 1979-1980. I took the position hoping that it would turn into a permanent Position and to receive college teaching experience.

High School Vocational Electronics- East High School, Aurora, Illinois 1978-1979. I taught three different levels of electronics at the high school. One was an industrial arts survey course and the other two were vocational electronics. Furthermore, I was responsible for all the Audio equipment used during seminars and sports.

PUBLICAITIONS: "HE-4185- Section II – Part 3 Activity 3 Program Planning and Development" Federal grant 1997
"Insider" Ferris Faculty and Staff Journal 1997
"Insider" Ferris Faculty and Staff Journal 1996
"Senate Forum" Ferris State University 1993

PRESENTATIONS: "Senate Address" during faculty week 1998 Addressed the inter Campus in Williams Auditorium.

"Senate Address" during faculty week 1997 Addressed the inter Campus in Williams Auditorium.

Academic Honors Convocation, Director of Ceremonies March 19, 1995.

"Back to the Future" Technology and Industry Conference March 1992.
"Technical Education – Getting the Job Done" American

Technical Education Association (ATEA) Great Lakes Regional Conference November 1990.

PROFESSIONAL ORGANIZATIONS

National Association of College Automotive Teachers (member)
National Education Association (member)
Society of Automotive Engineers (member)
Ferris Faculty Association (member)

COMMITTEE PARTICIPATION

A. Department Committee

Chair Auto Body program review
Ferris State University, 1998

Program Curriculum Committee
College of Technology
Ferris State University, 1988-1998

Automotive Service Advisor Committee
College of Technology
Ferris State University, 1987-1998

ASEP, ASSET, CAP Advisor Committee
College of Technology
Ferris State University, 1998

Chair Automotive Service Program Review Committee College of Technology Ferris State University 1996-1997

CO Chair Faculty Advisory Committee to the Dean of
College of Technology
Ferris State University 1995

B. University Wide Committees

Elected President of the Academic Senate 1998-1999 Unanimous
Ferris State University

Elected President of the Academic Senate
Ferris State University 1997-1998

Elected Vice President of the Academic Senate
Ferris State University 1996-1997

Chair of the Senate Governance Committee
Ferris State University 1996-1997

North Central Self-Study Committee
Ferris State University 1996-1997

Library Construction Committee
Ferris State University 1996-1997

Elected Vice President of the Academic Senate
Ferris State University 1995-1996

Management Development Planning Committee
Ferris State University 1996-1997

Chair of the Senate Governance Committee
Ferris State University 1995-1996

Represented the Senate on the University Assessment Committee
Ferris State University 1994-1995

Academic Senate Conference Committee To The Administration's plan for Fiscal Restructuring.
Ferris State University, 1994-1995

Elected Vice President of the Academic Senate
Ferris State University, 1994-1995

Chair of the Senate Appointments Committee
Ferris State University, 1994-1996

CO Chair Search Committee for Dean College of Technology
Ferris State University, 1994-1995

Senate Election Committee
Ferris State University. 1994

Senate Conference Committee For Television Production Program
Ferris State University, 1994

Search Committee For Dean
College of Technology
Ferris State University, 1993

Elected to Senate Executive Committee As Information Officer
Ferris State University, 1992-1993.

Automotive Machine Program Review Panel
College of Technology
Ferris State University, 1993

Elected to the Academic Senate
Ferris State University, 1991, 1993, 1995, 1996, 1998

Name	Email	Organization	ORG Number
Greg KEY		FERRIS STATE UNIVERSITY GMASEP	A002865

Active Transcripts

Course	Title	Session	Score	Grade	Date	Expires
16041.01W-R2	Battery, Charging, & Starting		100	P	02/15/2002	
13044.10W	Electronic Suspension Systems		100	P	01/11/2002	
98083.01	Electrical Principles and Diagnostics (GMICT/Med. Duty)		100	P	01/01/2002	
96088.15	Tech 2 (GMICT/Med. Duty)		100	P	01/01/2002	
13044.10H	Electronic Suspension Systems		100	P	12/31/2001	
18043.01W-R2	Electrical/Electronics Stage 1		100	P	10/16/2001	
18043.02W-R2	Electrical/Electronics Stage 2		100	P	10/16/2001	
18043.03W-R2	Electrical/Electronics Stage 3		100	P	10/16/2001	
19047.03W2	Entertainment Systems		100	P	02/20/2001	
16046.10W	6.5 L Diesel Engine		100	P	01/01/2001	
16044.10W2	[illegible]ain Performance - Part 2		100	P	01/01/2001	
16044.10W3	[illegible]rain Performance - Part 3		100	P	01/01/2001	
16044.10D3	GM Powertrain Performance - Part 3		100	P	01/01/2001	
ASEAUT01	AUTO: ENGINE REPAIR			P	07/31/2000	07/01/2004
ASEAUT04	AUTO: SUSPENSION & STEERING			P	07/31/2000	07/01/2004
ASEAUT05	AUTO: BRAKES			P	07/31/2000	07/01/2004
ASEAUT06	AUTO: ELECTRICAL SYSTEMS			P	07/31/2000	07/01/2004
ASEAUT08	AUTO: ENGINE PERFORMANCE			P	07/31/2000	07/01/2004
16048.15W	Tech 2 Familiarization		0	P	03/15/2000	
15045.10D1	Foundation Brakes/ABS System Service - Part 1		0	P	03/15/2000	
15045.10D2	Foundation Brakes/ABS System Service - Part 2		0	P	03/15/2000	
15045.10H	Foundation Brakes/ABS System Service		0	P	03/15/2000	
15045.10W	Foundation Brakes/ABS System Service		0	P	03/15/2000	
17041.20D1	Automatic Transmission Diagnostics - Part 1		0	P	03/15/2000	
17041.20H	Automatic Transmission Diagnostics		0	P	03/15/2000	

17041.20D2	Automatic Transmission Diagnostics - Part 2	0	P	03/15/2000	
17041.20W	Automatic Transmission Diagnostics	0	P	03/15/2000	
22048.22H	GM Air Bag Systems	0	P	03/15/2000	
18043.02W	Electrical/Electronics Stage 2	0	P	03/14/2000	
16045.20H	Diesel Engine Performance	0	P	03/14/2000	
18043.01W	Electrical/Electronics Stage 1	0	P	03/14/2000	
16044.10W1	GM Powertrain Performance - Part 1	0	P	03/14/2000	
16041.01W	Battery, Charging, & Starting	0	P	03/14/2000	
16044.10D1	GM Powertrain Performance - Part 1	0	P	03/14/2000	
16044.10D2	GM Powertrain Performance - Part 2	0	P	03/14/2000	
16044.10H	GM Powertrain Performance	0	P	03/14/2000	
15045.30W	4WAL ABS	0	P	03/13/2000	
13043.10W	Chassis Electronics	0	P	03/13/2000	
13043.10H	Chassis Electronics	0	P	03/13/2000	
16040.02W	OBD II	0	P	03/13/2000	
17041.29W	4L80-E Automatic Transmission	0	P	03/13/2000	
18043.03W	Electrical/Electronics Stage 3	0	P	03/13/2000	
19047.03W1	Entertainment Systems	0	P	01/01/2000	
19047.03H	Entertainment Systems	0	P	01/01/2000	
ASEAUT08	AUTO: ENGINE PERFORMANCE		P	12/29/1999	06/30/2004
ASEAUT04	AUTO: SUSPENSION & STEERING		P	12/29/1999	06/30/2004
ASEAUT05	AUTO: BRAKES		P	12/29/1999	06/30/2004
ASEAUT06	AUTO: ELECTRICAL SYSTEMS		P	12/29/1999	06/30/2004
ASEAUT01	AUTO: ENGINE REPAIR		P	12/29/1999	06/30/2004

Inactive Transcripts

Course	Title	Session	Score	Grade	Date	Expires
22048.22D2	GM Air Bag Systems - Part 2		0	P	03/15/2000	
22048.22D1	GM Air Bag Systems - Part 1		0	P	03/15/2000	
16045.20D1	Diesel Engine Performance - Part 1		0	P	03/14/2000	
16041.01D	Battery, Charging, & Starting		0	P	03/14/2000	
16045.20W	Diesel Engine Performance		0	P	03/14/2000	
16045.20D2	Diesel Engine Performance - Part 2		0	P	03/14/2000	
17041.29D	4L80-E Automatic Transmission		0	P	03/13/2000	
13043.10D2	Chassis Electronics - Part 2		0	P	03/13/2000	
13043.10D1	Chassis Electronics - Part 1		0	P	03/13/2000	
15045.30D	4WAL ABS		0	P	03/13/2000	
19047.03D	Entertainment Systems		0	P	01/01/2000	

ASEAUT07	AUTO: HEATING & AIR CONDITIONING		P	12/29/1999	06/30/2000
18003.14	INTERMITTENT ELECTRICAL CONCERNS DIAGNOSIS	0	P	06/01/1998	
16015.25	6.5L DIESEL OBD II	24	P	06/01/1998	
16009.10	GM FUEL INJECTION DIAGNOSIS	85	P	03/02/1998	
16797.00	DRIVEABILITY SEMINAR - CURRENT CONCERNS	0	P	08/20/1997	
18001.19	CORVETTE ELECTRICAL/ELECTRONICS	20	P	08/20/1997	
10016.00	INTRODUCTION TO ELECTRONIC SERVICE INFORMATION (ESI) AND INTEGRATED SERVICE SOFTWARE (ISS)	0	P	07/28/1997	
46018.01	TECHLINE DIAGNOSTIC & INFORMATION TERMINALS TEST-OUT	20	P	06/27/1997	
16030.02	ON BOARD DIAGNOSTICS GENERATION II	0	P	08/30/1996	
16018.15	TECH 2 FAMILIARIZATION	20	P	06/20/1996	
59407.00	PERSONAL AUTOMOTIVE SECURITY SYSTEM (P.A.S.S.)	15	P	05/14/1996	
52008.17	GEO PRIZM SUPPLEMENTAL RESTRAINT SYSTEM (SRS) DRIVER'S SIDE AIR BAG	19	P	[illegible]/1996	
59407.02	CHEVROLET SECURITY SYSTEMS	20	P	04/17/1996	
50396.20	CHEVROLET CAR AND TRUCK NEW FEATURES PULSAT TELECAST	20	P	02/08/1996	
50396.23	GMC TRUCK NEW MODEL FEATURES PULSAT TELECAST	20	P	02/08/1996	
50396.10	CADILLAC NEW MODEL FEATURES PULSAT TELECAST	20	P	02/08/1996	
50396.13	PONTIAC NEW MODEL FEATURES PULSAT TELECAST.	20	P	02/08/1996	
19007.03	GM AUDIO SYSTEMS	24	P	02/05/1996	
22008.22	GM AIR BAG SYSTEMS	20	P	01/30/1996	
18001.11	ELECTRONICS STRATEGY BASED DIAGNOSTICS	19	P	01/03/1996	
16009.18	LT1/L99 FUEL & EMISSIONS	20	P	01/02/1996	
53404.00	SPEED DEPENDENT DAMPING	14	P	06/07/1995	
50395.00	1995 NEW MODEL FEATURES PULSAT TELECAST	20	P	04/11/1995	

50395.01	1995 RIVIERA NEW MODEL FEATURES - PULSAT TELECAST	20	P	04/11/1995
50395.03	LUMINA / MONTE CARLO NEW MODEL FEATURES - CHEVROLET	20	P	04/10/1995
53404.00	SPEED DEPENDENT DAMPING	11	I	01/25/1995
53092.00	ADJUSTABLE STEERING COLUMN SERVICE & DIAGNOSIS	20	P	01/20/1995
18001.02	SPECIALIZED ELECTRONICS TRAINING	90	P	06/29/1994
50394.23	CONFIDENCE 94 NEW MODEL FEATURES FOR PONTIAC CARS	20	P	06/16/1994
50394.28	CONFIDENCE 94 TELECAST FOR CADILLAC CARS	20	P	06/16/1994
50394.21	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLET TRUCKS	20	P	06/16/1994
50394.20	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLET CARS	20	P	06/16/1994
50394.25	CONFIDENCE 94 NEW MODEL FEATURES FOR BUICK CARS	16	P	06/16/1994
13003.03	CHASSIS ELECTRONICS	0	P	06/08/1994
14003.04	ALL WHEEL DRIVE/FOUR WHEEL DRIVE SYSTEMS	25	P	02/14/1994
18001.09	CADILLAC FLEETWOOD ELECTRONICS	84	P	11/29/1993
00220.00	ASEP RESOURCE DEVELOPMENT	0	P	02/22/1993
16003.01	ENGINE PERFORMANCE TESTING	0	P	02/08/1993
16018.01	TECHLINE DIAGNOSTIC & INFORMATION TERMINALS	0	P	07/20/1992
16009.10	GM FUEL INJECTION DIAGNOSIS	40	P	03/22/1991
16009.10	GM FUEL INJECTION DIAGNOSIS	40	P	03/20/1991
19006.00	CRUISE CONTROL	20	P	12/19/1990
18005.06	APPLIED AUTOMOTIVE ELECTRONICS	0	P	12/11/1990
16009.17	3.4L FUEL AND EMISSIONS	0	P	12/11/1990
10391.01	1991 MODEL NEW FEATURES	0	P	10/30/1990
13003.00	SUSPENSION, ALIGNMENT AND WHEEL BALANCE	0	P	10/29/1990
22008.15	BUICK, OLDS AND CADILLAC SUPPLEMENTAL INFLATABLE	25	P	10/15/1990

	RESTRAINTS, GENERATION I			
13002.01	VIBRATION DIAGNOSIS AND REPAIR	10	P	06/20/1990
15005.07	TEVES II ABS	0	P	06/20/1990
16009.11	FUEL INJECTION DRIVEABILITY	0	P	05/31/1990
19007.02	WINDSHIELD WIPER & WASHER SYSTEMS	0	P	05/31/1990
11004.01	AIR CONDITIONING COMPRESSOR SERVICE	25	P	05/24/1990
15005.04	DELCO MORAINE III ANTILOCK BRAKE SYSTEM - 1989 THRU 1991	20	P	04/23/1990
22008.12	CHEVROLET SUPPLEMENTAL INFLATABLE RESTRAINTS, GENERATION I	0	I	03/23/1990
16021.01	BATTERIES, CHARGING AND CRANKING SYSTEMS	19	P	02/28/1990
56488.01	1988 QUAD 4 ENGINE MECHANICAL AND ELECTRONIC CONTROL SYSTEMS	41	P	12/19/1989
16009.13	GEO-TRACKER AND METRO TBI EMISSIONS CONTROL SYSTEMS	12	P	12/19/1989
18001.02	SP[illegible]D ELECTRONICS T[illegible]	90	P	12/19/1989
16018.10	TECH 1 FAMILIARIZATION	20	P	12/19/1989
16009.10	GM FUEL INJECTION DIAGNOSIS	23	P	12/19/1989
16020.05	DISTRIBUTORLESS IGNITION SYSTEMS	15	P	12/19/1989
16016.13	NOVA, SPECTRUM, SPRINT CARBURETION & EMISSIONS	15	P	12/19/1989
15005.04	DELCO MORAINE III ANTILOCK BRAKE SYSTEM - 1989 THRU 1991	15	P	12/19/1989
18001.05	ADVANCED SPECIALIZED ELECTRONICS TRAINING	0	P	12/19/1989
16003.01	ENGINE PERFORMANCE TESTING	15	P	12/19/1989

Close Window

VITA
DANIEL E. SKURSKI

EDUCATION:

Bachelor-of-Science; Automotive Technology; Indiana State University, 1978.
Minor: Business Administration

WORK EXPERIENCE:

District Service Manager, Nissan Motor Corporation, Jacksonville, Florida, Regional Office, 1981-1991.

Helped resolve customer complaints involving service related problems including working with the Better Business Bureau. Assisted Nissan dealers in solving technical problems. Sold service equipment and programs that would help in service department profitability. Audited warranty expenses and advised dealers on ways of reducing warranty expense waste. Worked with service departments to develop profitability through advertising,, training, and cost evaluations. Developed plans to increase the customer satisfaction index in the dealer's service department.

Zone Service Manager, Ford Motor Company, Detroit District, Wixom, Michigan, 1980-1981.

Worked with Ford and Lincoln-Mercury dealers in the same capacity as listed in the District Service Manager position for Nissan Motor Corporation.

Wholesale Parts Analyst, Ford Motor Company, Detroit District, Wixom, Michigan, 1979-1980

Worked with wholesale account set-ups including advertising, displays, purchasing, reordering, tracking shipments, and profit analysis.

Consumer Affairs Analyst, Ford Motor Company, Detroit District, Wixom, Michigan, 1978-1979.

Handled customer complaints on the telephone and through the mail. Worked with Better Business Bureau, dealers, and Zone Managers in resolving these customer complaints.

TEACHING EXPERIENCE:

Assistant Professor, Automotive Service Technology, Ferris State University, Big Rapids, Michigan, 1998 to present.

Areas of Concentration:

1. AUTO 113 Basic Electricity/Electronics
2. AUTO 116 Engine Electrical
3. AUTO 117 Electronic Fuel Management Systems

Technical Training Instructor, Nissan and Infiniti Products, Nissan Motor Corporation, Atlanta Training Center, Atlanta, Georgia, 1991-1998.

Taught classes to Nissan and Infiniti dealership technicians. Areas of concentration were: electrical and advanced electrical, manual and automatic transmission steering and suspension, brakes, engine mechanical, noise-vibration-harshness, heating and air conditioning, engine computer controls, use of specialized diagnostic equipment and oscilloscopes, emissions, OBD II and advanced OBD II and any new model classes.

Helped the Nissan and Infiniti national curriculum department develop course revisions involving all courses taught.

Controlled the budget, a 32 vehicle inventory, and tools and equipment for the Nissan and Infiniti Atlanta Training Center.

Contacted the dealers to assist in training needs, technician assessments, and warranty expense reductions.

Helped develop skill verification style of classes allowing more hands-on instruction. Helped new technical instructors develop their skills.

PROFESSIONAL ORGANIZATIONS:

Society of Automotive Engineers—SAE since 1976.
Vice-Chair of Student Activities--Western Michigan Section, 1998-2000.
Vice-Chair of Western Michigan Section, 2000-present.
Currently faculty advisor for Ferris State University Student P[illegible] SAE.
Chair for scholarship committee—1999-present
Service Technicians Society—STS since 1998.
Currently assisting faculty advisor at Ferris State University with student branch helping with student related field trips and student meetings.
North American Council of Automotive Teachers (NACAT) since 1999.

CERTIFICATIONS:

ASE Certifications:

Engine Repair	Expires July 1, 2002
Automatic Trans/Transaxle	Expires July 1, 2002
Manual Drive Train and Axles	Expires June 30, 2006
Suspension and Steering	Expires July 1, 2003
Electrical/Electrical Systems	Expires July 1, 2003
Heating and Air Conditioning	Expires July 1, 2003
Engine Performance	Expires July 1, 2003
Advanced Engine Performance	Expires, June 30, 2005

Certified in Refrigerant Recovery and Recycling through MACS (Mobile Air Conditioning Society).

Certified as an Evaluator for The Accreditation Board for Engineering & Technology (ABET).

INDUSTRIAL COURSES:

Chrysler Viper Training SP40332	12/15-19/98
GM Diagnostic and Information Terminals 16018.05	10/09/98
MDS II (Mopar Diagnostic System) DaimlerChrysler class	09/07-08/99
DaimlerChrysler RWD Fuel Injection class	05/09-10/00
DaimlerChrysler WJ Body Electrical class	05/16-17/00
Nissan 2000 Model Overview, NACAT Conference	07/18/00
DaimlerChrysler RS/RG Mechanical Update class	05/03/00
DaimlerChrysler Truck Brakes class	06/29/00

CONTINUING EDUCATION

Lilly Conference on College and University Teaching—Lake Arrowhead, CA 3/5-7/99
Lilly Conference on College and University Teaching—Athens, GA 2/11-13/00
Lilly Conference on College and University Teaching—Big Rapids, MI 9/21-23/01

PRESENTATIONS

Technician Update—Nissan Evaporative Emission Systems, 05/05/99
STS/SAE Integration—SAE Section Leader[illegible] Conference, Pittsburgh, PA 05/19/00

SEMINARS

Society of Automotive Engineers Section Leadership Conference, Pittsburgh, PA 05/19/00
Accrediting Board of Engineering Technology (ABET) evaluator training conducted by the Technology Accreditation Commission (TAC) 07/26/01

SPECIAL PROJECTS

Technician of the Future Days—publicity chair 09/30-10/01/98
Technician of the Future Days—publicity chair 10/13-14/99
North American Council of Automotive Teachers (NACAT) annual conference 2000—technical seminar chair 07/15-22/00
NACAT annual conference 2000—Production of "Introduction to Ferris" video
Technician of the Future Days—publicity chair 10/10-11/00
Research Paper: "An Analysis of a Four Year Engineering Degree at Ferris State University. Is it the Right Step According to Surveyed Automotive Companies? 06/19/01

BOOK REVIEWS

Automotive Electronics and Computer Systems (Prentice Hall) 10/2000

RECRUITMENT

Remus Middle School, Remus, MI 02/02/00

UNIVERTSITY COMMITTEES

Academic Program Review Committee 09/00-present

COMMUNITY SERVICE

American Legion Annual Poppy Sales 05/26/00 and 05/18/00

VITA
RONALD A. TUURI

EDUCATION:

Bachelor of Science, and Master of Science Degrees; Vocational Education; University Wisconsin-Stout, 1977 and 1984.

TEACHING EXPERIENCE:

Ferris State University, Big Rapids, MI, 1987 to present; Automotive Service Technology faculty. Previously taught four years vocational automotive at Grafton (Wisconsin) High School; also 8-1/2 years of evening adult automotive courses.

WORK EXPERIENCE:

Varied. Over 20,600 hours total in the automotive service industry as a technician and as a dealership service department manager.

PROFESSIONAL ASSOCIATIONS:

NACAT (North American Council of Automotive Teachers) member.

1996 Charter Member is STS (Service Technician Society); affiliate of SAE (Society of Automotive Engineers).

RECOGNITION AND HONORS:

Master Automobile Technician status by ASE, in eight certification areas, since 1981.

Certified by ATRA (Automatic Transmission Rebuilders Association) in all certification areas.

Certified by the EPA (Environmental Protection Agency) through ASE certifying program, in Refrigerant Recovery and Recycling.

PUBLICATIONS:

Co-authored Automatic Transmissions and Transaxles, 4th Edition (Delmar, 1997 copyright).

Article printed in November 1993 issue of Tech Directions, titled "Emerging Automotive Terminology & Technology".

RELATED ACTIVITIES/CREDENTIALS:

Consulting service: Technical Services and Assessments, Inc. Activities include: preparing automotive service training programs for the NATEF/ASE certification process, technical writing, manuscript reviewing, and conducting evaluations and assessments for technicians and automotive training programs.

Completed a 40-hour WEBCT training program, to be able to develop course work on to the internet, January 1999.

National Occupational Competency Testing Institute (NOCTI)/SOCAT automotive technician test workshop, November 1996.

Automotive Service Excellence (ASE) national certification test workshop-Automobile Manual Drive Train and Axles Certification Test, October 1996.

Evaluation Team Leader (ETL) for the National Automotive Technician's Education Foundation (NATEF)/ASE.

Associated with Engineering Analysis Associates (EAA) and Chrysler Arbitration Board.

Certification test administrator/proctor for Automotive Transmission Rebuilders Association (ATRA), since 1988.

1993 team member for "Manual Transmission and Drivetrain Curriculum" project for Ford Motor Company training programs.

Manuscripts reviewer for two textbooks: Manual Drive Train and Axles (January, 1993) and Automotive Emissions Systems (March, 1994).

INDUSTRY COURSES/WORKSHOPS: (1992 to Present)

General Motors: Approximate total training = 56 days.

Ford Motor Company: Approximate total training = 42 days.

Chrysler Corporation: Approximate total training = 8 days.

State of Michigan – Federal Emission Control IM240 (Inspection/Maintenance, 240 second emission test) training (June, 1995).

1994 Big T Transmission Industry Conference, Cincinnati, Ohio; toured Ford transmission assembly plant in Sharonville, Ohio (October, 1994).

1993 NACAT (North American Council of Automotive Teachers) annual conference, High Point, North Carolina.

ATRA (Automatic Transmission Rebuilders Association) = Two one-day seminars (July, 1993 and November, 1992).

Name	Email Organization	ORG Number
R TUURI	FERRIS STATE UNIVERSITY GMASEP	A002865

Active Transcripts

Course	Title	Session Score	Grade	Date	Expires
18043.01W-R2	Electrical/Electronics Stage 1	100	P	10/16/2001	
18043.02W-R2	Electrical/Electronics Stage 2	100	P	10/16/2001	
18043.03W-R2	Electrical/Electronics Stage 3	100	P	10/16/2001	
16046.10W	6.5 L Diesel Engine	100	P	01/01/2001	
11044.00W	Introduction to Air Conditioning	0	P	03/15/2000	
11044.00D2	Introduction to Air Conditioning - Part 2	0	P	03/15/2000	
17043.20W	NV 4500 Manual Transmission	0	P	03/15/2000	
13042.10D1	Vibration Correction - Part 1	0	P	03/15/2000	
13042.10D2	Vibration Correction - Part 2	0	P	03/15/2000	
13042.10W	Vibration Correction	0	P	03/15/2000	
13042.10H	Vibration Correction	0	P	03/15/2000	
16048.15W	Tech 2 Familiarization	0	P	03/15/2000	
17041.20D1	Automatic Transmission Diag[illegible] Part 1	0	P	03/15/2000	
17041.20D2	Automatic Transmission Diagnostics - Part 2	0	P	03/15/2000	
17041.20W	Automatic Transmission Diagnostics	0	P	03/15/2000	
17041.20H	Automatic Transmission Diagnostics	0	P	03/15/2000	
17043.20D	NV 4500 Manual Transmission	0	P	03/15/2000	
22048.22D1	GM Air Bag Systems - Part 1	0	P	03/15/2000	
22048.22W	GM Air Bag Systems	0	P	03/15/2000	
22048.22H	GM Air Bag Systems	0	P	03/15/2000	
22048.22D2	GM Air Bag Systems - Part 2	0	P	03/15/2000	
11044.00D1	Introduction to Air Conditioning - Part 1	0	P	03/15/2000	
14041.10W	Rear Axle & Propeller Shaft	0	P	03/14/2000	
14041.10D1	Rear Axle & Propeller Shaft - Part 1	0	P	03/14/2000	
14041.10D2	Rear Axle & Propeller Shaft - Part 2	0	P	03/14/2000	
14041.10H	Rear Axle & Propeller Shaft	0	P	03/14/2000	
16043.40D1	Engine Mechanical Diagnosis/Measurement - Part 1	0	P	03/14/2000	
16043.40D2	Engine Mechanical Diagnosis/Measurement - Part 2	0	P	03/14/2000	
16043.40W	Engine Mechanical	0	P	03/14/2000	

	Diagnosis/Measurement			
16043.40H	Engine Mechanical Diagnosis/Measurement	0	P	03/14/2000
16045.20D1	Diesel Engine Performance - Part 1	0	P	03/14/2000
16045.20D2	Diesel Engine Performance - Part 2	0	P	03/14/2000
16045.20H	Diesel Engine Performance	0	P	03/14/2000
17041.32D	4T65-E Automatic Transaxle	0	P	03/14/2000
17041.32W	4T65-E Automatic Transaxle	0	P	03/14/2000
17043.10D	NV 3500 Manual Transmission	0	P	03/14/2000
17043.10W	NV 3500 Manual Transmission	0	P	03/14/2000
18043.01W	Electrical/Electronics Stage 1	0	P	03/14/2000
18043.02W	Electrical/Electronics Stage 2	0	P	03/14/2000
14043.10D	AWD & 4WD & Auto 4WD	0	P	03/13/2000
14043.10W	AWD & 4WD & Auto 4WD	0	P	03/13/2000
16040.02W	OBD II	0	P	03/13/2000
17041.29D	4L80-E Automatic Transmission	0	P	03/13/2000
17041.29W	4L80-E Automatic Transmission	0	P	03/13/2000
18043.03W	Electrical/Electronics Stage 3	0	P	03/13/2000

Inactive Transcripts

Course	Title	Session	Score	Grade	Date	Expires
ASEAUT02	AUTO: AUTOMATIC TRANS/TRANSAXLE			P	07/31/2000	08/01/2001
ASEAUT04	AUTO: SUSPENSION & STEERING			P	07/31/2000	08/01/2001
ASEAUT03	AUTO: MANUAL DRIVETRAIN & AXLES			P	07/31/2000	08/01/2001
ASEAUT05	AUTO: BRAKES			P	07/31/2000	08/01/2001
ASEAUT07	AUTO: HEATING & AIR CONDITIONING			P	07/31/2000	08/01/2001
ASEAUT06	AUTO: ELECTRICAL SYSTEMS			P	07/31/2000	08/01/2001
ASEAUT08	AUTO: ENGINE PERFORMANCE			P	07/31/2000	08/01/2001
ASEAUT01	AUTO: ENGINE REPAIR			P	07/31/2000	08/01/2001
16045.20W	Diesel Engine Performance	0		P	03/14/2000	
ASEAUT08	AUTO: ENGINE PERFORMANCE			P	12/29/1999	08/01/2001
ASEAUT07	AUTO: HEATING & AIR CONDITIONING			P	12/29/1999	08/01/2001
ASEAUT06	AUTO: ELECTRICAL SYSTEMS			P	12/29/1999	08/01/2001
ASEAUT05	AUTO: BRAKES			P	12/29/1999	08/01/2001
ASEAUT03	AUTO: MANUAL DRIVETRAIN & AXLES			P	12/29/1999	08/01/2001
ASEAUT04	AUTO: SUSPENSION & STEERING			P	12/29/1999	08/01/2001

ASEAUT02	AUTO: AUTOMATIC TRANS/TRANSAXLE		P	12/29/1999	08/01/2001
ASEAUT01	AUTO: ENGINE REPAIR		P	12/29/1999	08/01/2001
14003.05	AUTOMATIC FOUR WHEEL DRIVE	25	P	09/02/1999	
10016.00	INTRODUCTION TO ELECTRONIC SERVICE INFORMATION (ESI) AND INTEGRATED SERVICE SOFTWARE (ISS)	0	P	08/04/1999	
16018.05	GM DIAGNOSTIC AND INFORMATION TERMINALS	20	P	10/21/1998	
18003.14	INTERMITTENT ELECTRICAL CONCERNS DIAGNOSIS	0	P	06/01/1998	
16015.25	6.5L DIESEL OBD II	24	P	06/01/1998	
17001.32	4T65-E DIAGNOSIS AND SERVICE	10	P	05/04/1998	
10016.99	INTRODUCTION TO WINDOWS FOR TECHNICIANS	0	P	09/22/1997	
17797.00	AUTOMATIC TRANSMISSION SEMINAR - CURRENT CONCERNS	0	P	09/22/1997	
18001.19	CORVETTE ELECTRICAL/ELECTRONICS	20	P	08/20/1997	
16797.00	DRIVEABILITY SEMINAR - CURRENT CONCERNS	0	P	08/20/1997	
46018.01	TECHLINE DIAGNOSTIC & INFORMATION TERMINALS TEST-OUT	20	P	06/27/1997	
16018.15	TECH 2 FAMILIARIZATION	20	P	08/30/1996	
57015.00	4T40-E TRANSAXLE	20	P	07/15/1996	
50396.23	GMC TRUCK NEW MODEL FEATURES PULSAT TELECAST	20	P	02/27/1996	
50396.11	OLDSMOBILE NEW MODEL FEATURES PULSAT TELECAST	20	P	02/27/1996	
50396.10	CADILLAC NEW MODEL FEATURES PULSAT TELECAST	20	P	02/27/1996	
50396.20	CHEVROLET CAR AND TRUCK NEW FEATURES PULSAT TELECAST	20	P	02/27/1996	
50396.13	PONTIAC NEW MODEL FEATURES PULSAT TELECAST.	20	P	02/27/1996	
16030.01	ON BOARD DIAGNOSTICS GENERATION II - (UPDATE FOR 16030.00)	20	P	02/22/1996	
18001.11	ELECTRONICS STRATEGY BASED DIAGNOSTICS	19	P	01/03/1996	

22008.22	GM AIR BAG SYSTEMS	20	P	11/30/1995
51010.15	134A RETROFIT FOR GM CARS AND TRUCKS	19	P	07/15/1995
50395.00	1995 NEW MODEL FEATURES PULSAT TELECAST	20	P	04/11/1995
50395.01	1995 RIVIERA NEW MODEL FEATURES - PULSAT TELECAST	20	P	04/11/1995
50395.03	LUMINA / MONTE CARLO NEW MODEL FEATURES - CHEVROLET	20	P	04/10/1995
51205.01	BUICK "DUAL ZONE" CLIMATE CONTROLS	14	P	01/07/1995
17001.19	HYDRA-MATIC 4T80E 4-SPEED AUTOMATIC TRANSAXLE	40	P	09/12/1994
16030.00	ON-BOARD DIAGNOSTICS GENERATION TWO FOR 1995	20	P	08/08/1994
16015.15	6.5L DIESEL ELECTRONIC FUEL INJECTION	25	P	08/08/1994
56015.10	ON-BOARD DIAGNOSTICS GEN II HISTORY & 1995 FEATURES	20	P	08/04/1994
50394.28	CONFIDENCE 94 TELECAST FOR CADILLAC CARS	20	P	06/16/1994
50394.20	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLET CARS	20	P	
50394.23	CONFIDENCE 94 NEW MODEL FEATURES FOR PONTIAC CARS	20	P	06/16/1994
50394.22	CONFIDENCE 94 NEW MODEL FEATURES FOR GMC TRUCKS	20	P	05/06/1994
50394.28	CONFIDENCE 94 TELECAST FOR CADILLAC CARS	20	P	05/06/1994
50394.24	CONFIDENCE 94 NEW MODEL FEATURES FOR OLDSMOBILE CARS	20	P	05/06/1994
50394.21	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLET TRUCKS	20	P	05/06/1994
50394.25	CONFIDENCE 94 NEW MODEL FEATURES FOR BUICK CARS	16	P	05/06/1994
50394.20	CONFIDENCE 94 NEW MODEL FEATURES FOR CHEVROLET CARS	20	P	05/06/1994
50394.23	CONFIDENCE 94 NEW MODEL FEATURES FOR PONTIAC CARS	20	P	05/06/1994
59407.00	PERSONAL AUTOMOTIVE	13	P	02/18/1994

	SECURITY SYSTEM (P.A.S.S.)			
14003.04	ALL WHEEL DRIVE/FOUR WHEEL DRIVE SYSTEMS	25	P	02/14/1994
16014.11	4.0L/4.6L ENGINE MECHANICAL	25	P	02/14/1994
11005.17	LIGHT DUTY TRUCK AIR CONDITIONING CONTROLS	15	P	11/17/1993
51010.00	R-134A AIR CONDITIONING REFRIGERANT	23	P	11/05/1993
16018.98	ADVANCED TECH 1	0	P	10/20/1993
50394.10	NEW MODEL FEATUES FOR S/T PICK-UP TRUCK	20	P	10/18/1993
11005.10	A/C CONTROLS - C60, C65, C67 AND C68 NON-BCM SYSTEMS	29	P	07/16/1993
11004.00	INTRODUCTION TO A/C	20	P	07/12/1993
14003.04	ALL WHEEL DRIVE/FOUR WHEEL DRIVE SYSTEMS	25	P	04/30/1993
17001.18	HYDRA-MATIC 4L60E 4-SPEED AUTOMATIC TRANSMISSION	40	P	04/29/1993
57490.01	HYDRA-MATIC 4T60E ELECTRONICALLY-SHIFTED TRANSAXLE	15	P	02/05/1993
17001.17	4L80E 4-SPEED AUTOMATIC TRANSMISSION	20	P	01/26/1993
57488.00	PONTIAC 6000 STE ALL WHEEL DRIVE	22	P	12/18/1992
57490.00	HYDRA-MATIC 4T60E ELECTRONICALLY SHIFTED TRANSAXLE DIAGNOSIS	13	P	12/18/1992
50491.00	OLDSMOBILE BRAVADA FEATURES	14	P	12/18/1992
16018.10	TECH 1 FAMILIARIZATION	17	P	12/15/1992
17003.13	NVG4500 5-SPEED MANUAL TRANSMISSION	24	P	12/16/1991
13002.02	VIBRATION CORRECTION	0	P	11/26/1991
18005.06	APPLIED AUTOMOTIVE ELECTRONICS	10	P	11/26/1991
17002.03	HYDRA-MATIC 4T60E 4-SPEED AUTOMATIC TRANSAXLE	15	P	02/28/1991
19007.02	WINDSHIELD WIPER & WASHER SYSTEMS	0	P	05/31/1990
11004.01	AIR CONDITIONING COMPRESSOR SERVICE	25	P	05/24/1990
13002.01	VIBRATION DIAGNOSIS AND REPAIR	10	P	04/30/1990

17001.11	4L60 (700-R4) AUTOMATIC TRANSMISSION	23	P	02/28/1990
17002.02	GEO STORM 4 SPEED AUTOMATIC TRANSAXLE	10	P	02/28/1990
14003.03	K-SERIES TRUCK FOUR WHEEL DRIVE	18	P	12/19/1989
18001.02	SPECIALIZED ELECTRONICS TRAINING	94	P	12/19/1989
17002.00	125-125C (3T40) AUTOMATIC TRANSAXLE	0	I	12/19/1989
17004.04	5TM40 (HM-282) 5-SPEED MANUAL TRANSAXLE	8	P	12/19/1989
14001.00	REAR AXLES AND PROPELLER SHAFTS	7	P	12/19/1989
17003.11	5LM60 (HM-290) SERIES MANUAL TRANSMISSIONS	8	P	12/19/1989
17001.12	4T60 (440-T4) AUTOMATIC TRANSAXLE	22	P	12/19/1989

Close Window

Auto Service Overloads

2000-2001 1.47 Actual
2001-2002 2.14 Projected
2001-2002 2.16 Actual
2002-2003 2.5 Projected

2002

Gary Gage: One year temp last 4-5 years.
Overload: Were lower in 2002 because of moving Vic Fowler to cover auto service classes
Mike Hachman: 3 Credits Over
Bill Wagner: 2 Credits Over
Ron Tuuri: 3 Credits Over

Auto Body Faculty

Faculty/Staff	Faculty/Load	Overload
Gary Gage	17/45	19/39
Vic Fowler	18/30	18/30
Mike Hachman	15/39	
Bill Wagner	26/36	
Ron Tuuri	23/39	

Overload not paid… internal transfer, but will need to be paid next year because of Gary Edgerly retirement.

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.
Based on the enrollment trends for the last six years for Auto Body and Auto Service p… 3/0
would be to run the Auto Body program with two faculty instead of three and transfer Ga… y's 0/6
position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the 0/3
Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the 40/78 = 2.16 Overloads
program will still have the highest overloads in the College of Technology.

Program	1996	1997	1998	1999	2000	2001	2002	2003
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

Will need to replace all three positions:

Faculty Name	Position	Date Retiring
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

Colleges of Engineering Technology in the U.S. - 1999 Data

School	# of Students	# of B.S. Grads
Cleveland State University	no info	no info
Indiana University Purdue University at Indianapolis	no info	no info
Kansas State University	no info	no info
SUNY College at Buffalo (Buffalo State College)	no info	33
SUNY Institute of Technology at Utica/Rome	1908	no info
Ferris State University	1605	216
Purdue University	1456	236
Southern Polytechnic State University	1267	92
Texas A&M University	1156	253
Rochester Institute of Technology	1067	no info
Wentworth Institute of Technology	690	156
Oregon Institute of Technology	641	129
University of Nebraska, Lincoln	623	38
Oklahoma State University	571	141
DeVry Institute of Technology, Phoenix	536	263
Old Dominion University	498	112
DeVry Institute of Technology, Chicago	433	112
DeVry Institute of Technology, Columbus	416	103
Pennsylvania State University at Erie	402	95
The University of Toledo	387	85
Michigan Technological University	382	118
DeVry Institute of Technology, Addison	374	84
DeVry Institute of Technology, Pomona	368	76
University of North Texas	363	29
Northeastern University	347	113
New York Institute of Technology	1	81
Montana State University	301	60
New Mexico State University	299	49
DeVry Institute of Technology, North Brunswick	291	no info
University of Maine	270	48
The University of Memphis	265	62
Prairie View A&M University	256	19
University of Dayton	252	63
Northern Illinois University	250	38
DeVry Institute of Technology, Irving	239	66
South Dakota State University	238	43
Texas Tech University	226	32
Temple University	226	78
Brigham Young University	226	53
Minnesota State University, Mankato	219	51
Western Kentucky University	216	28
University of Hartford	214	44
DeVry Institute of Technology, Kansas City	208	58
DeVry Institute of Technology, Long Beach	201	42
DeVry Institute of Technology, Decatur	196	91
West Virginia University Institute of Technology	166	48
Milwaukee School of Engineering	159	58
Bradley University	155	37
Embry-Riddle Aeronautical University, Daytona Beach	146	39
Capitol College		65
New Jersey Institute of Technology		102

Source: American Society of Engineering Education
www.asee.org

Weber State University	146	46
University of North Carolina, Charlotte	136	112
University of Southern Colorado	136	22
Lake Superior State University	110	13
Western Carolina University	99	149
Louisiana Tech University	94	32
University of Massachusetts, Lowell	88	39
Southern Illinois University Carbondale	58	22
University of Central Florida	55	12
Wayne State University	49	56
Tri-State University	44	5
University of Delaware	33	16

Source: American Society of Engineering Education
www.asee.org

Trainir cords for:

RONALD LAN TUURI

Student ID: 399582263

FERRIS STATE UNIVERSITY ASSET PROGRAM

3/29/01

Code Courses	% Complete	Transmitted	Last Used	Minutes in Course
30S01M0 - Wind Noise and Water Leaks Diagnosis and Repair	100	No	10/26/00	105
31S01S0 - Essentials of Driveability Diagnosis (Self-Study)	100	No	10/6/00	16
31S02S0 - Ignition System Theory and Operation (Self-Study)	100	No	10/6/00	20
31S03M0 - Ignition System Diagnosis and Analysis	100	No	10/8/00	202
31S04S0 - Exhaust and Emission System (Self-Study)	100	No	10/7/00	87
31S05M0 - Exhaust and Emission System Diagnosis and Analysis	100	No	10/9/00	311
31S10M0 - Advanced Driveability	0	No	10/27/00	4
32S01S0 - Base Engine Operation and Diagnosis (Self Study)	100	No	9/24/00	10
32S02M0 - Automotive Measuring Tools	100	No	8/29/00	29
32S03M0 - Base Engine Operation and Diagnosis	100	No	9/27/00	136
33S01S0 - Base Steering and Suspension (Self-Study)	100	No	10/16/00	6
33S02M0 - Base Steering and Suspension	100	No	10/23/00	307
33S05S0 - Electronic Steering and Suspension (Self Study)	100	No	12/26/00	32
33S06M0 - Electronic Steering and Suspension	100	No	12/26/00	396
33S10F0 - Steering and Suspension System Alignment (Fordstar)	100	No	10/19/00	13
33S11F0 - Multiplexed Steering and Suspension Systems (Fordstar)	100	No	10/19/00	20
34S01S0 - Basic Electrical Part 1 (Self Study)	100	No	6/22/00	8
34S02M0 - Basic Electrical	100	No	7/23/00	98
34S07S0 - Networks and Multiplexing Part 1 (Self Study)	100	No	8/20/00	39
34S08M0 - Networks and Multiplexing Part 2	100	No	8/20/00	258
34S09F0 - Automotive Batteries (FORDSTAR)	100	No	6/22/00	6
35S01S0 - Refrigeration and Heating (Self-Study)	100	No	10/21/00	9
35S02S0 - Air Management and Controls (Self-Study)	100	No	10/21/00	24
35S03M0 - Climate Control System Diagnosis	100	No	10/23/00	479
36S01S0 - Differential and Driveline Operation (Self Study)	100	No	10/22/00	5
36S03S0 - Manual Transmission and Transaxle (Self Study)	100	No	10/22/00	4
36S04M0 - Manual Transmission and Transaxle	100	No	10/22/00	109
36S06S0 - Transfer Case and 4-wheel Drive System Operation (Self St	100	No	10/22/00	4
36S07F0 - Transfer Case and 4-wheel Drive System Operation (Fordst	100	No	10/22/00	7
37S01M0 - AT Hydraulic & Mechanical Operations	100	No	10/26/00	83
37S02M0 - Automatic Transmission Electronic Control Systems	100	No	10/27/00	258
37S04M0 - Association Transmission Electronic Diagnosis	0	No	10/28/00	1
38S01S0 - General Brakes Theory and Operation (Self-Study)	100	No	10/15/00	38
38S02S0 - ABS Theory and Operation (Self-Study)	100	No	10/15/00	18
38S03M0 - General and ABS Diagnosis	81	No	3/29/01	358
51S01S0 - Diesel Engine Operation (Self Study)	100	No	9/24/00	20
51S02S0 - Diesel Engine Electronics (Self Study)	100	No	9/25/00	102

Training Records for:

RONALD ALAN TUURI

Student ID: 399582263

FERRIS STATE UNIVERSITY ASSET PROGRAM

3/29/01

Code	Courses	% Complete	Transmitted	Last Used	Minutes in Course
31S10M0	Advanced Driveability	100	No	10/28/00	372
37S04M0	Association Transmission Electronic Diagnosis	100	No	10/28/00	253
38S02S0	ABS Theory and Operation (Self-Study)	0	No	11/29/00	32

Training Records for:

RONALD ALAN TUURI

Student ID: 399582263

FERRIS STATE UNIVERSITY ASSET PROGRAM

3/29/01

Code	Courses	% Complete	Transmitted	Last Used	Minutes in Course
51S03M0	'7.3L DIT Diesel Engine Performance Diagnosis	100	No	9/27/00	764
52S01F0	'7.3L Diesel Engine Design and Repair (Fordstar)	100	No	9/24/00	63

BENJAMIN Q UPHAM

VITAE

OBJECTIVE

A technical instructor position that requires the ability to keep pace with technology and changing delivery techniques.

BACKGROUND

More than fourteen years experience in the automotive field with an emphasis on instructional design and delivery. Particularly effective in modifying instructional materials and presentation methods to meet the needs of the audience.

EDUCATION

2000 to Present	Completing coursework to obtain Master of Science degree in Career and Technical Education from Ferris State University.
1990 to 1992	Bachelor of Science in Technical Education Ferris State University, Big Rapids, MI
1985 to 1987	Associates Degree in Automotive Technology Ferris State University, Big Rapids, MI

EMPLOYMENT

2000 to Present

Assistant Professor
Ferris State University, Big Rapids, MI
(231) 591-2655
Assistant Professor for the Ford ASSET program

- Develop new delivery methods for instruction
- Instruct students on academic activities
- Promote university and specifically automotive programs
- Serve on college and department committees

2000

Automotive Instructor
Wexford-Missaukee Career Technical Center, Cadillac, MI
(231) 876-2207

- Instructed High School students in Automotive Repair

1999 to 2000

Senior Technical Instructor
Mazda Great Lakes, Grand Rapids, MI
(616) 949-7570
Coordinated training center activities, with emphasis on technical training development and delivery.

- Created, evaluated, and delivered technical instruction
- Supported technical assistance hotline
- Researched product concerns
- Evaluated repair information
- Developed troubleshooting information

1995 to 1999

Technical Instructor
Mazda Great Lakes, Grand Rapids, MI
(616) 949-7570
Reformatted existing training materials to meet the needs of students.

- Converted existing training materials to meet the needs of students
- Built video projection system for testing equipment
- Delivered technical instruction

1995 to 1995

Automotive Para-Professional
Ferris State University, Big Rapids, MI
Facilitated a Structural Learning Assistance Program

- Attended automotive classes with students
- Administered mandatory tutoring sessions

1995 to 1995

Service Advisor
Triangle Auto Sales, Big Rapids, MI
(231) 796-7617
Managed daily work flow through service department

- Scheduled service work
- Interviewed customers to determine complaint
- Routed work flow through shop
- Developed estimates and contacted customers

1990 to 1995

Automotive Technician
University Chevrolet, Big Rapids, MI
(231) 796-7619
Repaired automobiles based on customer concerns

- Diagnose vehicles to determine origin of concerns

- Develop estimates to establish repair costs
- Performed mechanical work

1991 to 1993

Temporary Automotive Instructor
Newaygo County Area Vocational Center,
Freemont, MI
(231) 924-0380
Taught automotive repair classes

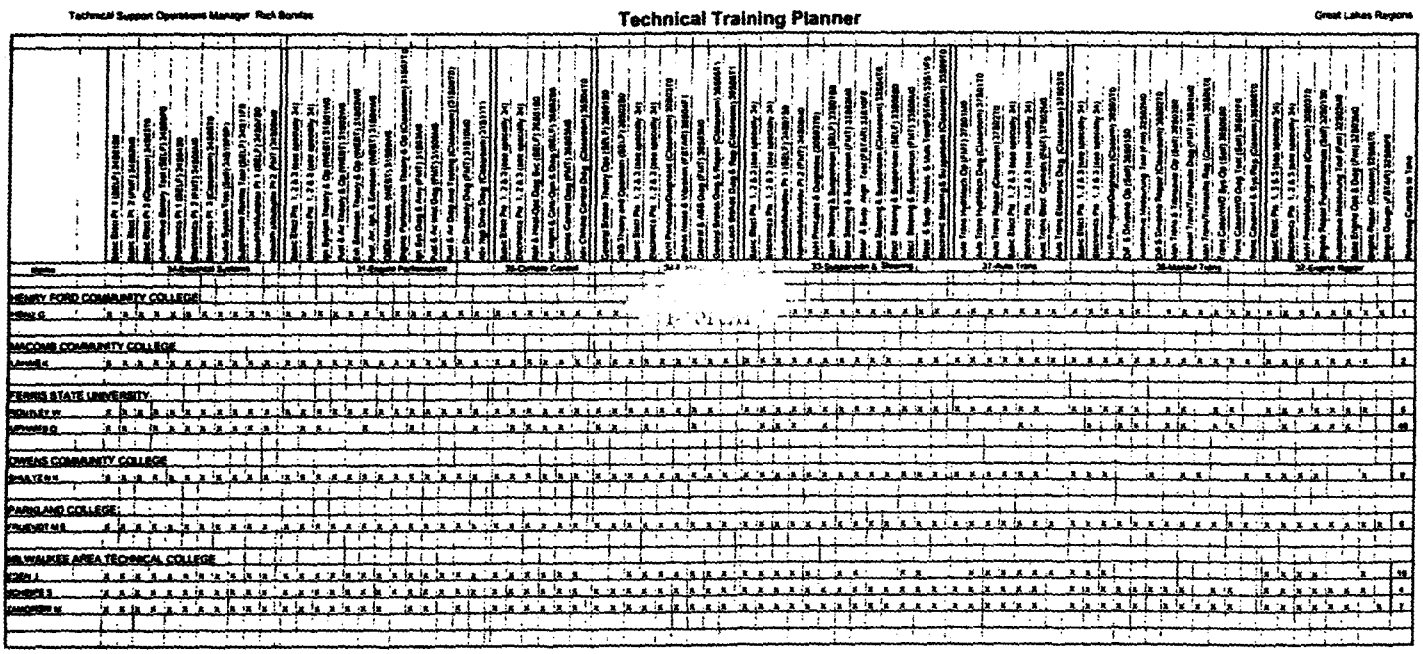
- Fulfilled student teaching requirements for degree
- Conducted summer exploration program
- Taught automotive class in a temporary position

TRAINING

Beginning Power Point
Power Point Enhancing Presentations
Beginning Excel
Daryl Sink Course Developer Workshop
Lilly Conference
Ford Motor Company's Transfer of Skills Workshop
See attached Ford Training Record

CERTIFICATIONS

N.I.A.S.E. Certified Master Automobile Technician wit... ...ion
State of Michigan Certified Master Technician
Mazda Master Technician


Technical Support Operations Manager: Rich Bonifas
Technical Training Planner
Great Lakes Region
HENRY FORD COMMUNITY COLLEGE
MACOMB COMMUNITY COLLEGE
FERRIS STATE UNIVERSITY
OWENS COMMUNITY COLLEGE
PARKLAND COLLEGE
MILWAUKEE AREA TECHNICAL COLLEGE

William D. Wagner

VITAE

EDUCATION: Associates Degree, Ferris State University, Applied Science, 1972

WORK EXPERIENCE: Mechanic, Staal Buick, Grand Rapids, Michigan, 1972

Mechanic, AAMCO Transmissions, Grand Rapids, Michigan, 1972

Technician, AMC Research and Development, Detroit, Michigan, 1973

TEACHING EXPERIENCE: Ferris State University, Big Rapids, Michigan, 1973-1976, Instructor Assistant

Ferris State University, Big Rapids, Michigan 1976 –1990, Instructor

Ferris State University, Big Rapids, Michigan 1990 to present, Assistant Professor

William D. Wagner

Educational Updates
Since 1989

Course Number	Course Name	Course Date	Hours
18001.02	Specialized Electronics Training	5/26/89	64
16018.10	Tech 1 Familiarization	7/31/89	8
16009.11	Fuel Injection Driveability	5/16/90	8
11004.01	A/C Compressor Service	5/17/90	8
16009.10	Fuel Injection EFI/PFI	2/26/91	16
16009.10	Fuel Injection EFI/PFI	3/12/91	16
10392.00	1992 New Model Features	10/11/91	8
18005.06	Applied Automotive Electronics	11/19/91	16
13002.02	Vibration Correction	11/21/91	16
16009.10	Fuel Injection EFI/PFI	2/11/92	24
.1022.01	4.6lL Northstar Powertrain	1/26/93	16
56490.00	3.4L Twin Dual Cam Engine	6/5/93	2
56091.12	ZR1 LT5 Engine Mechanical	6/7/93	2
57490.01	4T60E Hydramatic	9/28/93	2
56014.05	4.1 / 4.5 / 4.9 Engine Mech.	11/11/93	2
56488.01	Quad 4 Engine Mech.	11/28/93	4
56488.02	High Output Quad 4	11/30/93	2
50394.20	Chevrolet New Model	12/5/93	4
50394.23	Pontiac New Model	12/20/93	4
50394.21	Olds New Model	1/20/94	4
50394.22	GMC Truck New Model	1/26/94	4
50394.28	Cadillac New Model	2/2/94	4
14003.04	All Wheel Drive- 4WD	2/7/94	16
16016.11	Northstar Eng. Mech	2/9/94	16

William D. Wagner

Educational Updates Since 1989

50395. 03	Lumina/ Monte Carlo New Model	3/6/95	2
50395.01	95 Riviera New Model	3/7/95	4
50395.00	95 New Model features	3/7/95	4
18001.11	Advanced Electronics SBD	12/19/95	24
50396.20	Chevrolet New Model	2/6/96	2
50396.10	Cadillac New Model	2/6/96	2
50396.13	Pontiac New Model	2/8/96	2
50396.23	GMC Truck New Model	2/8/96	2
50396.11	Olds. New Model	2/22/96	2
16015.20	6.5L Diesel EFI / Mech	4/23/96	24
16030.02	OBD GEN II	8/13/96	24
16018.15	Tech II	8/16/96	
57488.00	STE AWD	11/4/96	2
56091.01	4.3 CPI	11/1/96	2
56025.00	3.3 SFI	11/2/96	2
50491.00	Bravada Features	11/7/96	2
56013.00	Corvette 5.7 Gen III	4/18/97	2
15005.12	Delphi VI ABS	5/8/97	8
46018.01	Techline Diagnostics	6/13/97	8
10016.00	ESI Electronic Service Info	7/25/97	8
18001.19	Corvette Electronics	8/5/97	16
16797.00	Driveability Seminar	8/7/97	8
14001.00	Rear Axle and Prop Shafts	8/19/97	16
Superflow Seminar	Engine Airflow Development	10/4/97	8
Superflow Seminar	Enhanced Engine Performance	11/8/97	8

William D. Wagner

Educational Updates Since 1989

56013.01	5.7 Gen III LS1	4/13/98	2
18003.14	Intermittent Electrical Diag.	5/27/98	8
16015.25	6.5 Diesel OBD II	5/28/98	16
16013.00	5.7 LS1 Specialized Repair	7/9/98	16
16018.05	GM Diagnostic Terminals	10/9/98	8
56013.02	Gen III Cast Iron 5.7	10/28/98	2
Superflow Seminar	Advanced Dynamometers	11/21/98	8
54400.10	Catera Rear Axle	6/1/99	2
56013.01	Gen III 5.7 Aluminum	6/1/99	2
56013.02	Gen III Cast Iron 5.7	6/1/99	2
56013.10	3.5 L V6	6/1/99	2
14003.04	AWD / 4WD	7/99	16
14003.05	Automatic 4WD	[illegible]/99	8
Superflow Seminar	Engine Airflow development	9/16/00	8

Total hours of classes 650

Automotive Department

Memo

To: Automotive Department Faculty

From: Greg Key

Date: 10/26/01

Re: Career Day

We have been invited to several Career Day activities. We need volunteers to visit one of the following schools. Let Anita know your choice as soon as possible so we can let the schools know that someone will be attending.

School	Date	Instructor
Newaygo	October 24, 2001	Pete Alley & Jim Bigelow 9:00 am – 2:40 pm
Oxford High School Contact: Dan Balsley 248-969-1825	October 26, 2001	Dan Skurski – Two Sessions (1) 7:30 am – 9:30 am (2) 12:30 pm – 2:30 pm
Calhoun Area Vocational Center Contact: Marty LaCasse	October 30, 2001	Two Sessions (1) 8:00 am (2)12:00 pm
Northwest Career Center, Ohio	November 6, 2001	Vic Fowler 10:00 am – 1:30 pm
Oakland Community Schools	November 9, 2001	Greg Key 6:00 am
Genesee-GASC Technology Center	November 14, 2001	Three Sessions 7:30 am - 1:30 pm
Kent Skills Career Tech Center	December 14, 2001	Gary Edgerly
Davie High School in Illinois		John Gahrs
Macomb Community College		Greg Denny

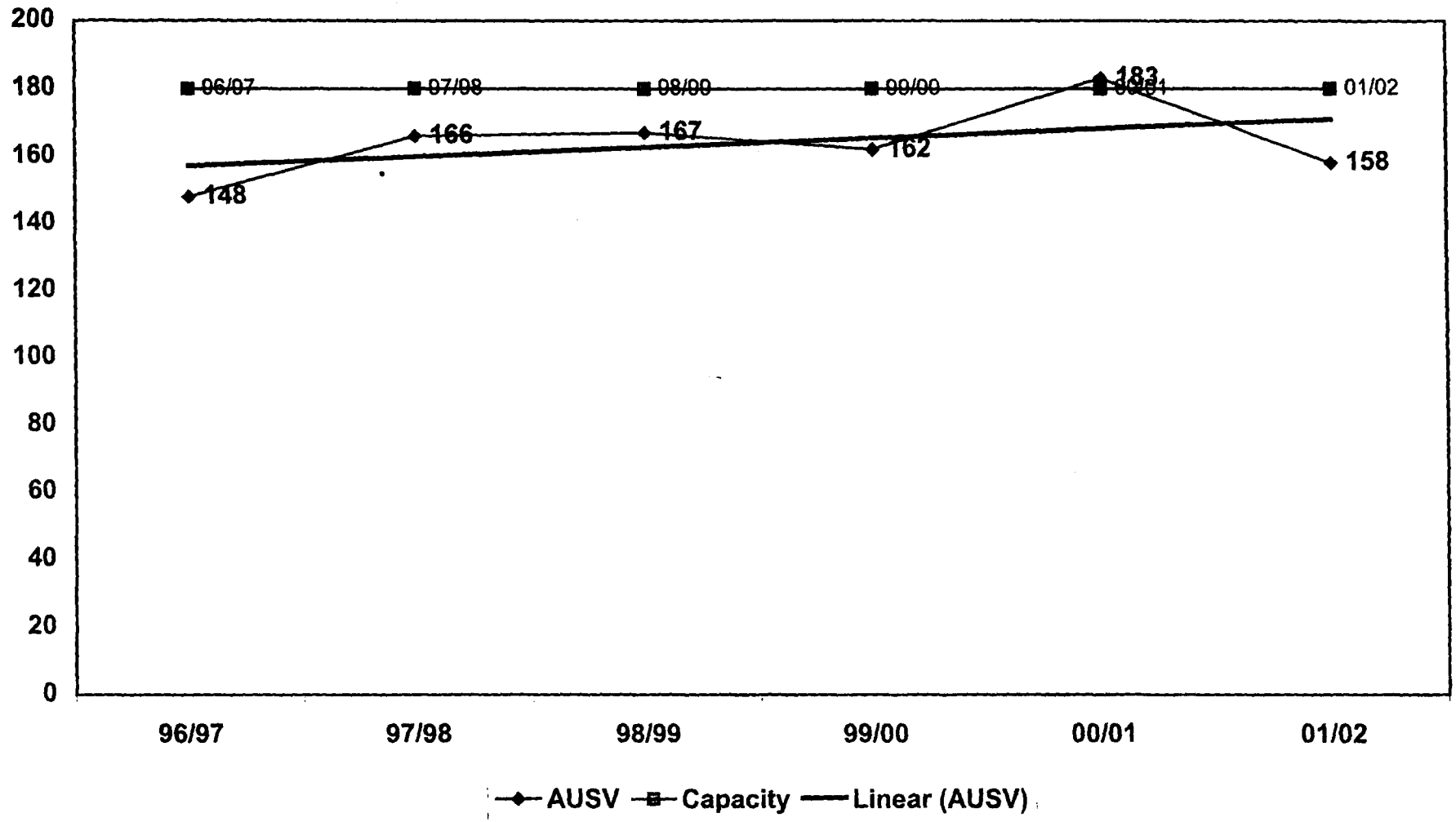
TECH OF THE FUTURE DAYS
SCHEDULE

Date	Arrival Time	School/Instructor	Address/Phone	# Of students	AS	HES	Campus Tour	Lunch	# Busses Arriving
2-Oct	9:30 AM	Gladwin High School-David Sleeper *Mach Tool and HVAC*	1400 North Spring Street Gladwin 48624 Phone: 989-426-7341 Fax: 989-426-6031	20	X	X	X-1:00	X	1
3-Oct	9:30 AM	Central Lake School-Dennis Aenis		6	10:45	9:45 10:45		X	
9-Oct	10:00 AM	Newaygo Career Tech Center—John Link	4645 West 48Th Street Freemont 49412	120	1st	2nd		HEQ	2
	10:00 AM	Branch Area Career Center-Rick Furney	366 Morse Street Coldwater 49036	13	1st	2nd		HEQ	
	10:00 AM	Cadillac Wexford-Missaukee ISD-Matt McNulty	9901 East 13th Street Cadillac 49601 231-876-2241	132	2nd	1st		X	3
	10:30 AM	Calhoun Area Vocational Center-Lee Weaver	475 East Roosevelt Battle Creek 49017	55	12:00	10:30		HEQ	1
	8:45 am	Heartland Inst of Technology-Dave Armentrout	250 E Tuttle Road Ionia 48846 616-527-0542	70	1st	2nd		HEQ	2
	9:30 am	Montcalm Area Career Center-Phil Allen	1550 West Sidney Road Sidney 48885 517-328-6621	22	1st	2nd		HEQ	1
16-Oct	10:00 AM	Traverse City Career Tech Center-Jim Wrede	880 Parson Road Traverse City 49686	125	X	X	X	X	2
17-Oct	9:30/2:00	Coleman Community HS-Manuel Hagon	PO Box W Coleman 48618 989-465-9851 (HVAC Also)	30	X	X	X	X	1
23-Oct	10:00 AM	Bay Arenac Career Center-Richard Neidzwiecki	4155 Monitor Road Bay City MI 48906 Fax: 989-667-3282 Phone: 989-686-4770	163	X	X		X	3
	9:05 AM	Mecosta Osceola Career Center-Ron Kanitz	15830 190th Avenue BR	22	2nd	1st		X	1
	12:15 PM	Mecosta Osceola Career Center-Ron Kanitz	15830 190th Avenue BR	22	1st	2nd		1st-X	1
		Lapeer High School (Flint)	About 10 students per every other week	10					
30-Oct	9:30 am	St. Johns High School- Larry Button	501 West Sickles Street St. Johns 48879	45	2nd	1st	X	X	1
	9:30 am	New Hall Middle School-Jan Kail	1840 38th Street SW Wyoming 49509 616-530-7590	25	1st	2nd		X	1
	9:30 am	Careerline Tech Center-Doug Ide	13663 Port Sheldon Holland 49424 616-738-8950	42	2nd	1st		X	1
	9:30 am	Southern Lake Career Center-Greg Warner	2100 W Thomson Rd Fenton 48430	4	1st	2nd		X	
	10:30 AM	Huron Area Tech Center- Tony Syrankis	1160 South Van Dyke Bad Axe 48413	6	X			X	
	10:30 AM	Genesee-GASC Technology Center		80				X	

	10:30 AM	St. Claire Shores	499 Range Rd. Port Huron 48061 810-364-8990 X326	50	1st	2nd		X	1
6-Nov	10:30 AM	Tuscola Technology Center-Larry Hoelde	1401 Cleaver Road Caro 48723 989-673-5300 X470	50	X	X		X	1
	10:30 AM	Pankow Vocational Tech Center-Rich Stumpf	24600 F.V. Pankow Blvd Clinton Township 48036 810-783-6570 ext. 1402----Auto Body Only	65	X		X	X	2
	9:00 AM	Mecosta Osceola Career Center-Ken Barnard	15830 190th Avenue BR	22	X	X		X	1
	12:30 PM	Mecosta Osceola Career Center-Ken Barnard	15830 190th Avenue BR	20	X	X		X	1
12-Nov	10:00 AM	Cheboygan High School	810 W. Lincoln Cheboygan 49721	50	X	X		X	
	9:00 AM	East Jordan High School-Dan Brennan	PO Box 399 East Jordan 49727	16	2nd	1st		X	1
13-Nov	8:30/1:00	Kent Skills Career Tech Center-Richard Goldner	1655 East Beltline, NE Grand Rapids 49505 616-364-8421 (Space	300	2nd	1st		X	4
	10:30 AM	Huron Area Tech Center – Tony Syrankis	1160 South Van Dyke-Bad Axe 48413	6	X			X	
27-Nov	9:30 AM	Traverse City Career Tech Center- Dan Bowers	880 Parson Road Traverse City 49686 AUTO BODY---ONLY	45	X				1
4-Dec	10:30 AM	Davidson High School- George Johnston	1250 North Oak Rd. Davidson 48423 810-591-3531 ext. 248	25	X	X		X	1

Lapeer High School is bring 10 students every other week

A.A.S. AUTO PROGRAM
ENROLLMENT & CAPACITY



M E M O R A N D U M

DATE: February 27, 1997

TO: Academic Senate

FROM: Academic Program Review Council

RE: Recommendations for Automotive Service Programs

CC: Greg Key, Jack Richards, Mark Curtis, Tom Oldfield

We recommend that the Automotive Service program be continued.

(1) The program has a number of important strengths:

- It is central to Ferris' mission.
- By virtue of its size, comprehensive offerings, and close ties to industry, it is an asset to the University.
- Through the placement of graduates throughout Michigan and the region, it provides a service to the state and nation.
- Quality of instruction is high.
- Deve[illegible]f the curriculum shows evidence of care by a faculty attentive to th[illegible]ole of the automotive service professional.
- Facilities and equipment show both the care of the faculty and the willingness of industry to support the program.
- Placement rates indicate that there is a consistent demand for graduates.
- Comments from graduates, employers, and the advisory board are positive.
- The faculty is experienced and well-qualified.

(2) The program should take the following steps to maintain its current status:

- Take advantage of the opportunity to create a second entry point into the curriculum. A rise to a level of about 100 students per cohort would produce a payoff in terms of enrollment, cost, and use of faculty and equipment.
- Continue to experiment with SLA classes to improve student performance and reduce attrition.
- The institution needs to assure that should Carl Perkins funds no longer be available, the program will continue to receive the equipment funds it needs to supplement its considerable industrial support.

M E M O R A N D U M

DATE: February 28, 1997

TO: Academic Senate

FROM: Academic Program Review Council

RE: Recommendations for Programs Reviewed in 1996-1997 Cycle

CC: Teshome Abebe, Jeff Cross, Tom Oldfield; Deans Barnes, Cory, Curtis, Rallo; all PRP Chairs

The Academic Program Review Council presents its recommendations for the eleven programs reviewed in the 1996-1997 cycle. That this review has been successfully completed is the result of hard work on the part of many people. The Council wants to recognize especially the members of the program review panels—faculty, administration, friends, alumni—who agreed last spring to commit themselves to the effort required to produce a self-study.

Our recommendations for individual programs have been summarized on three pages following this document. The full-text recommendations for each program follow in alphabetical order. We recommend that three programs be enhanced, and eight be continued, four with monitoring. For each program under review, we have made additional individual recommendations as well. Some of these recommendations involve planning; some involve curriculum; some involve recruitment; some involve the expenditure of resources. Some can be done at the program level; a number require the University to organize an FSU-wide effort.

The Council wishes to highlight four areas of concern that cut across the programs we reviewed, and, we suspect, across many other Ferris programs as well:

1. **Data Quality**: Academic program review, budgeting, planning and other functions of the University require accurate and reliable data. We commend the Office of Institutional Studies, whose *Instructional Program Teaching Costs /1995-1996* was a valuable resource, but we and other users have noted absences (French, German) and cost miscalculations at various places in the document. We believe that a Task Force on Data Quality should be convened with the charge to develop a model for generating, checking, and making available high quality and reliable data for a variety of campus users.
2. **SIS+**: One difficulty encountered by program review panels has been accurately counting the number of students in their programs. Miscalculation of this number can throw carefully -made course-offering plans into disarray, and can result in too many students taking courses out of sequence or on an independent study basis. A way of addressing this

difficulty would be to give SIS+ the capability of reporting students as having more than one major (i.e., known to be working on more than one degree). The system should also be able to count numbers of minors and certificates. Whatever trouble this might take would be worthwhile in terms of advisement, planning, and budgeting.

3. **Graduate Placement Tracking**: Program review reveals that some programs--perhaps aided by a national association to which graduates belong, or by a particularly assiduous program coordinator who keeps in touch with the graduates--have little trouble in locating their graduates, while others have a great deal of difficulty tracking down more than a small percentage of those who have graduated beyond the last five years. We think it would be valuable if the campus groups with a stake in this subject--Academic Affairs, the Placement Office, the Alumni Office--convened a working group to identify what is now being done and make recommendations about how a more comprehensive system might be developed.

4. **Replacement of Perkins Funds**: As is mentioned in the recommendations of several specific programs, the University must have a funds replacement plan ready in the event Carl Perkins funds disappear. Across campus, many programs are the recipients of generous support from industry, but the University must be ready to supplement that support.

Program review is mandated by NCA, but to be effective it must be carried out by the faculty, supported by the administration, and integrated into the budgetary and planning processes of the University. The program review p[illegible]e Council have done their part: we ask that the Academic Senate a[illegible] University (through the Division of Academic Affairs) now do theirs.

The Academic Program Review Council

Douglas Haneline, Arts and Sciences, Chair

David Hanna, Technology

Cindy Konrad, Allied Health Sciences

Mary Murnik, Arts and Sciences

Norwood "Woody" Neumann, Pharmacy

Gary Ovans, Technology

Walter "Bud" Short, Business

Joan Totten, University College

SUMMARY OF RATINGS AND RECOMMENDATIONS

PROGRAM	RATING	RECOMMENDATIONS
Nuclear Medicine Technology (B.S. & A.A.S.)	Continue	--Build higher level of cooperation between faculty. --Respond to student comments by updating professional skills. --Make curriculum revisions recommended by PRP. --Develop method to track and advise students working toward NMT degrees but who are listed as enrolled in other programs.
Radiography (A.A.S.)	Continue with Monitoring	--Faculty need to develop smooth and productive professional relationship. --Faculty need to enhance professional competencies. --Program should raise entry requirements and reduce enrollments, addressing both labor market and graduate quality problems. --Revise curriculum in terms of number of credits required for degree and too-lengthy internship. --Study program initiative options, make needs assessments, and decide on direction before proposing program initiatives. --Submit better-researched and written documents to accrediting body for visit this spring. --Program must be reviewed again by APRC in two years and monitored by Provost during interval.
Respiratory Care (A.A.S.)	Continue	--Make curriculum revisions recommended by PRP. --[illegible] this report's data to assure that better [illegible]p data is available in the future. --Study the question of whether Ferris should offer a B.S. degree in Respiratory Care.
Professional Golf Management (B.S.)	Enhance	--add a tenure-track faculty acting as internship coordinator/administrative assistant. Add a secretary to the program. --Appoint task force to examine relationship of Katke Golf Course and PGM program. Missions of the two should be coordinating, complementary, and mutually supportive. --Develop facilities and equipment enhancement plan to take advantage of industry's willingness to work with and donate to the PGM program.
Professional Tennis Management (B.S.)	Enhance	--Add a tenure-track faculty/coordinator to the program. --Allocate funds for upgraded recruitment activities. --Funds should come from revenues from tennis camps.
Insurance (B.S.) and Insurance/Real Estate (B.S.)	Continue with Monitoring	--Prepare a recruitment plan: work with FSU counselors, h.s. counselors, and target non-traditional students. --Advertise more aggressively the existing Insurance minor and certificate. --Study and revise curriculum to make it more flexible and attractive to non-traditional and transfer students (internal and external).

		--Prepare a plan to achieve more industrial visibility: attendance at professional meetings, advertising in trade journals, etc. --Revise General Education checklist so students have more flexibility in choosing cultural enrichment courses to meet requirements. --Management Department needs to begin to develop a profile for the instructor who will eventually replace the current Insurance professor. --Provost's Office should monitor progress on these items; program must report back to APRC in two years on progress on these concerns.
Teacher Education Unit (M.S. Ed., B.S., A.A.)	Continue with Monitoring	--Fill currently posted vacant position. Keep second unfilled position vacant pending demonstration of its need. --Designate half-time coordinator from among current faculty. Coordinator must not be saddled with other administrative duties. --Develop and use measures already used by other Ferris programs to assess program effectiveness, currency, and demand. --Develop systematic recruitment plan for programs. --Revise methods of calculating load/overload so they conform to methods used in other Ferris colleges. --T.E. faculty need to travel less, centralize instruction, and use human resources more efficiently. Use distance learning technology for multiple sites or move to single-site system, as used in other Ferris programs. --Make long-term plan to cut back on use of adjuncts. --Work closely with content-area faculty in areas where teaching majors and minors are present. --Change system in teaching methods courses so that pedagogy specialists are on-campus content-area experts, not BRHS faculty. -- Develop system so to track and maintain contact with graduate students. --T.E. should not offer a doctoral program or be part of a consortium that does until it can be shown that Ferris has resources to do so. --T.E. needs to understand its own budget to deal with program expense anomalies. --Prepare higher quality document for external review this spring. --Provost's Office should monitor progress on these matters; T.E. must report back to APRC in one year on progress on these concerns.
Automotive Service Technology (A.A.S.)	Continue	--Create second entry point into curriculum. Rise in enrollment would help with costs and efficient use of faculty and equipment. --Continue to experiment with SLA classes to reduce attrition and improve student performance. --Should Perkins funds disappear, institution needs to replace them with funds to supplement the program's considerable industrial support.

Plastics Engineering Technology (B.S.) & Plastics Technology (A.A.S.)	Enhance	--Add an additional faculty position to the programs. --Programs need a coordinator with faculty rank. Faculty should develop rotation system to assure continuity in program administrative functions. --Programs need to develop a more effective advising model, perhaps beginning with FSUS class for each program cohort. --Programs need to develop long-range plan for adjusting curriculum, and sharing faculty, equipment, and facilities with Elastomer program.
Printing Management (B.S.) Printing Technology (A.A.S.)	Continue with Monitoring	--Develop equipment enhancement plan to be funded by a combination of University and external contributions. --Recruit intensively to fill latent student capacity in programs. If little or no gain is made in three years, then University should adjust faculty resources dedicated to the programs.
Welding Engineering Technology (B.S.) & Welding Technology (A.A.S.)	Continue	--Continue recruitment program under way until program capacity is reached. --Should Perkins funds disappear, institution needs to replace them with funds to supplement the programs' considerable industrial support.

ADMINISTRATIVE PROGRAM REVIEW: 2001

(final version – 10/24)

Program/Department: Automotive Service Date Submitted: 11/01

Please provide the following information:

Enrollment

	Fall 1997	Fall 1998	Fall 1999	Fall 2000	Fall 2001
Tenure Track FTE	11.61	12.23	12.9	12.6	12.58
Overload/Supplemental FTEF					
Adjunct/Clinical FTEF (unpaid)					
Enrollment on-campus total*	179	181	169	183	158
Freshman	73	79	91	183	74
Sophomore	59	67	59		63
Junior	16	17	10		18
Senior	3	4	2		3
Masters	15				
Doctoral					
Pre-Professional Students	13	14	7		
Enrollment off-campus*					
Traverse City					
Grand Rapids					
Southwest					
Southeast					

*Use official count (7-day)

If there has been a change in enrollment, explain why: Has climbed to an average of 170 fc

Capacity:

Estimate program capacity considering current number of faculty, laboratory capacity, current equipment, and current levels of S&E.

160-180 Students

What factors limit program capacity? Faculty: presently have 2 FTEF over loads.

Financial

Expenditures*	FY 97	FY 98	FY 99	FY 00	FY 01
Supply & Expense					
Faculty Prof. Development	1,500	2,000	1,500	2,002	1,183
General Fund	31,086	47,515	51,147	50,643	50,144
Non-General Fund					
UCEL Incentives					
FSU-GR Incentives					
Equipment					
Voc. Ed. Funds	36,075	43,750	32,555	32,450	40,061
General Fund	3,232	3,500	6,010	-0-	49,150
Non-General Fund	-0-	16,000	2,731	9,874	-0-
UCEL Incentives					
FSU-GR Incentives					

*Use end of fiscal year expenditures.

If you spent UCEL and FSU-GR incentive money for initiatives/items other than faculty professional development and equipment. what were they? Explain briefly. Please also include amounts spent on each initiative/item.

Revenues	FY 97	FY 98	FY 99	FY 00	FY 01
Net Clinic Revenue					
Scholarship Donations	1.000	1,000	1.000	0	0
Gifts, Grants, & Cash Donations				10,000	15.062
Endowment Earnings					
Institute Programs/Services					
In-Kind	500,271	152.571	82.342	176,792	202.024

Other

	AY 96/97	AY 97/98	AY 98/99	AY 99/00	AY 00/01
Number of Graduates* - Total				51	49
- On campus		53	59	51	49
- Off campus					
Placement of Graduates		99	98	99%	95.5%
Average Starting Salary					
Productivity - Academic Year Average	298.59	313.79	300.95	307.70	321.07
- Summer					
Summer Enrollment					

* Use total for full year (S, F, W)

1. a) Areas of Strength:

Productivity has increased because of certificate programs. AS AET Degree attracts new freshman productivity will continue to increase.

b) Areas of Concern and Proposed Action to Address Them:

Increase enrollment may cause faculty load problems. Presently Auto Service has 2 FTEF of over load and one of these over loads is presently being taught by one of the Auto Body teacher.

2. Future goals (please give time frame)

will have to shift one faculty from Auto Body to Auto Service.

3. Other Recommendations:

4. Does the program have an advisory committee? YES

a) **If yes, when did it last meet?** October 25, 2001 Ford (ASSET), March 29, 2001 General Motors (ASEP), February 21, 2001 Chrysler (CAP), April 4, 2001 Comprehensive

b) **If no, why not? By what other means do faculty receive advice from employers and outside professionals?**

c) **When were new members last appointed?**

d) **Are there non-alumni/ae on the committee? How many?** Most members are not Alumni.
Yes, you need to ask Jim/Bill/Pete.

5. Does the program have an internship or other cooperative or experiential learning course?

a) **If yes, is the internship required or recommended?** Internship is used for a replacement for second service floor in comprehensive program.

b) **If no, what is the reason for not requiring such an experience?**

twice a year.

6. Does the program offer courses through the web? NO

a) Please list the web-based (fully delivered through the Internet) courses the program offered last year?

NONE

b) Please list the web-assisted (e.g., WebCT) courses the program offered last year.

AUTO 111 & 211

7. What is unique about this program?

a) **For what distinctive characteristics is it known in the state or nation?**

Largest Auto Program in State

b) **What are some strategies that could lead to (greater) recognition?**

8. Questions about Program Outcomes Assessment (attach additional sheets, if necessary):

See Attached Sheets

a) What are the program's learning outcomes?

NATEF document list, course, and program outcomes.

b) What assessment measures are used, both direct and indirect?

NATEF Standards/Service Floor/ Coop Experience

c) What are the standards for assessment results?

NATEF standards are used and measured during the service floor and the co-op classes.
State and ASE certification

d) What were the assessment results for 2000-01?

e) How will / how have the results been used for pedagogical or curricular change?

Sequencing of class

9. Questions about Course Outcomes Assessment:

a) Do all multi-sectioned courses have common outcomes? YES

b) If not, how do you plan to address discrepancies?

c) Do you keep all course syllabi on file in a central location?

Yes, in Auto Center 101

***If you have questions about the outcomes assessment portions of this survey, please contact Laurie Chesley (x2713).**

Form Completed by _____ Department Chair
Name and Title

Reviewed by Dean _____
Name and Date

Automotive Department Assessment Plan

I. Auto Service and Auto Body

II. Responsibility/Timelines: Auto Service and Auto Body both use individual course and program assessment methods.

A. Short-term component (one year):

1. Both the Auto Service and Auto Body programs have capstone courses that are experiential learning courses. Auto Service has the two service floor courses that measure the ability of the students program course work.
2. Both programs use both a pre-post test system in all of there courses.

B. Long-term component (three year):

1. Auto Body uses course ABOD 214 to measure [illegible] of the to do the program work.
2. All of our graduates in both programs have to pass the Michigan Bar Automotive Regulation exam in order to work in the state of Michigan.
3. They can either take the national test ASE or the State of Michigan. Programs are certified by NATEF. Our GM, Ford, Chrysler, and Comprehensive programs were just recertified by NATEF until 2005.
4. All faculty have to be ASE certified in order for the program to become NATEF certified.

Automotive Department Assessment Plan

I. Auto Service and Auto Body

II. Responsibility/Timelines: Auto Service and Auto Body both use individual course and program assessment methods.

A. Short-term component (one year):

1. Both the Auto Service and Auto Body programs have capstone courses that are experiential learning courses. Auto Service has the two service floor courses that measure the ability of the students program course work.
2. Both programs use both a pre-post test system in all of there courses.

B. Long-term component (three year):

1. Auto Body uses course ABOD 214 to measur[illegible] of the to do the program work.
2. All of our graduates in both programs have to pass the Michigan Bar Automotive Regulation exam in order to work in the state of Michigan.
3. They can either take the national test ASE or the State of Michigan. Programs are certified by NATEF. Our GM, Ford, Chrysler, and Comprehensive programs were just recertified by NATEF until 2005.
4. All faculty have to be ASE certified in order for the program to become NATEF certified.

Exit survey and graduate survey results along with the findings from the advisory committee meeting were distributed in written form to all faculty in the Automotive service and body programs and the advisory committees.

III. AHM uses a number of tools to access student learning

A. Short-term component (one year):

1. The AHM program has a capstone course that is our experiential learning course.

B. Long-term component (three years)

1. Students have video tape-recorded presentations all the way ..gh the program to monitor their improvements.
2. Students are monitored during internship.
3. Both alumni, and employer surveys are used through program review.
4. Advisor committee reviews are used every year.
5. Students take a capstone course along with internship (AHEM 499).

C. Program Goals/Objectives:

1. To insure program content consistent with employer needs and with advance degrees.

2. To provide students with communication and decision-making experiences as a manager.
3. To increase students' global perspective of automotive management.
4. To provide students with an opportunity to use appropriate information technology.

D. Program Assessment Tools:

1. Students: Tests, cases, presentations, projects.
2. Courses: Student evaluations, advisory group input.
3. Major: Advisory group input, exit survey, graduate survey and employer surveys.

E. Distribution of Assessment results/Data Analysis:

Exit survey and graduate survey results along with the findings from the advisory committee meeting were distributed in written form to all faculty in the Automotive and Heavy Equipment Management program at the advisory committee.

Auto Service Overloads

2000-2001	1.47	Actual
2001-2002	2.14	Actual
2001-2002	2.16	Projected
2002-2003	2.5	Projected

2002

Gary Gage: One year temp last 4-5 years.
Overload: Were lower in 2002 because of moving Vic Fowler to cover service classes
Mike Hachman: 3 Credits Over
Bill Wagner: 2 Credits Over
Ron Tuuri: 3 Credits Over

Auto Body Faculty

Faculty/Staff	Faculty/Load	Overload
Gary Gage	17/45	19/39
Vic Fowler	18/30	18/30
Mike Hachman	15/39	
Bill Wagner	26/36	3/0
Ron Tuuri	23/39	0/6
		0/3
		40/78 = 2.16 Overloads

Overload not paid... internal transfer, but will need to b paid next year because of Gary Edgerly retirement.

With Gary Edgerly retiring Vic Fowler will be moved from teaching Auto Service classes to Auto Body classes. This will leave the Auto Service program short one more person.

Based on the enrollment trends for the last six years for Auto Body and Auto Service [illegible] would be to run the Auto Body program with two faculty instead of three and transfer Gary Edgerly's position to Auto Service. Vic Fowler from Auto Body has been teaching for the past two years in the Auto Service program. Even with replacing Gary Edgerly's position in the Auto Service program, the program will still have the highest overloads in the College of Technology.

Program	1996	1997	1998	1999	2000	2001	2002	2003
Automotive Service Technology	129	148	161	162	183	158	160	170
Automotive Engineering Technology						37	50-60	60-75
Total Enrollment	129	148	161	162	183	195	210-220	230-245

AET brought in thirty-seven new students fall of 2001 as juniors. These students will become seniors next year and we will have the prospect of starting twenty to forty new juniors in the fall of 2002. All I can predict is a very strong enrollment increase in the next few years for the Auto Service and AET programs, which are both taught by Auto Service faculty. This should increase the overloads to a minimum of 2.5 for the 2002-2003 year. As you can see these numbers are very conservative if you look at the 2001 enrollment. With 2 to 2.5 overloads and with three retirements I will be over 5 people short for Fall 2002. I desperately need to replace the three retirement positions.

Will need to replace all three positions:

Faculty Name	Position	Date Retiring
Ron Neiderheide	Automotive Service	December 2001
Bill Routley	Automotive Service	August 2002
Gary Edgerly	Automotive Service	August 2002

School	# of Students	# of B.S. Grads
Cleveland State University	no info	no info
Indiana University Purdue University at Indianapolis	no info	no info
Kansas State University	no info	no info
SUNY College at Buffalo (Buffalo State College)	no info	33
SUNY Institute of Technology at Utica/Rome	no info	no info
Ferris State University	1908	216
Purdue University	1605	236
Southern Polytechnic State University	1456	92
Texas A&M University	1267	253
Rochester Institute of Technology	1156	no info
Wentworth Institute of Technology	1067	156
Oregon Institute of Technology	690	129
University of Nebraska, Lincoln	641	38
Oklahoma State University	623	141
DeVry Institute of Technology, Phoenix	571	263
Old Dominion University	536	112
DeVry Institute of Technology, Chicago	498	112
DeVry Institute of Technology, Columbus	433	103
Pennsylvania State University at Erie	416	95
The University of Toledo	402	85
Michigan Technological University	387	118
DeVry Institute of Technology, Addison	382	84
DeVry Institute of Technology, Pomona	374	76
University of North Texas	368	29
Northeastern University	363	113
New York Institute of Technology	347	81
Montana State University	1	60
New Mexico State University		49
DeVry Institute of Technology, North Brunswick	301	no info
University of Maine	299	48
The University of Memphis	291	62
Prairie View A&M University	270	19
University of Dayton	265	63
Northern Illinois University	256	38
DeVry Institute of Technology, Irving	252	66
South Dakota State University	250	43
Texas Tech University	239	32
Temple University	238	78
Brigham Young University	226	53
Minnesota State University, Mankato	226	51
Western Kentucky University	226	28
University of Hartford	219	44
DeVry Institute of Technology, Kansas City	216	58
DeVry Institute of Technology, Long Beach	214	42
DeVry Institute of Technology, Decatur	208	91
West Virginia University Institute of Technology	201	48
Milwaukee School of Engineering	196	58
Bradley University	166	37
Embry-Riddle Aeronautical University, Daytona Beach	159	39
Capitol College	155	65
New Jersey Institute of Technology	146	102

Source: American Society of Engineering Education
www.asee.org