Ferris State University

College of Technology

Automotive Department

Automotive Engineering Technology & Automotive Service

Academic Program Review Committee

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Report

August 13, 2012

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Section 1
Program Overview

Section 1 - A. Program Goals

1) State the goals of the program. The AET goals are based on ABET accreditation standards.

Objective	Frequency	Evaluation
1. Employment in a discipline appropriate to the BS AET degree and AAS Automotive Service degree.	Annual	Graduate Exit Survey Alumni Survey Advisor Committee Input Academic Program Review
2. Achieve recognition as a valued employee through varied forms of promotion or merit.	Annual	Advisor Committee Input Alumni Survey Employer Survey
3. Demonstrate high standard of ethical and social values.	Annual	Advisor Committee Input Alumni Survey Employer Survey
4. Ability and desire to continue education through varied means including advanced degrees.	Annual	Alumni Survey Advisor Committee Input

The AUSV goals are established by the faculty using NATEF certification standards.

1. To provide students with the knowledge and skills necessary to professionally diagnose and repair automobiles and light trucks.
2. To provide students with knowledge and skills necessary to successfully compete in state and nationally recognized automotive evaluations.
3. To provide students with an educational foundation that allows for and encourages future growth.
4. To provide students with a safe, current and barrier free educational environment.
5. To provide students with flexible options that increase their opportunities, both educational and extracurricular, that will allow them to successfully compete in the job market.
6. To increase and foster the Automotive Service Department relationship with industry.
7. To use industry personnel to help guide the direction of the Automotive Service Department curriculum.
8. To provide the automotive service industry with qualified entry level repair

technicians and related personnel.
9. To help industry improve the perception of automotive service by encouraging
and providing voluntary technician testing and promoting honesty, integrity and professionalism.
10. To work as a liaison between industry and secondary/vocational schools in an effort to identify and recruit students that will be successful in the automotive industry.
11. To work within the university community and provide leadership on committees at the college and university levels.
12. To provide a strong and viable program that will bring recognition to the university and encourage industry support.
13. To increase the university's visibility through unique and innovative recruiting methods and curriculum offerings.
14. To promote professional development among faculty and staff and provide an environment that encourages innovative teaching methods.
15. To work with university administration to prepare a plan for future growth and expansion.

2) Explain how and by whom the goals were established.

The goals of the AET program were developed over a nine to ten year period. During this time, courses were designed and trial offerings were completed. Data and input addressing industry needs, which directed the development of the curricula and goals for the program were collected from potential employers, advisory committee members, students, and faculty.

The goals for the AUSV program have evolved over a 50-year period.

The goals were established by faculty and agreed upon by the departmental PRP (program review panel).

The Automotive Service Technology Faculty recognize that to have a successful program many aspects have to be realized and addressed. The goals that have been established were developed with three groups in mind. While there is some overlap among groups the department feels that in order to meet the specific needs of any one group there needs to be goals targeting that group.

The first five goals were established to address the needs of students. These goals will help us to stay focused on the most important part of our mission. These are the goals that will guide decision making on issues directly affecting students today and in the future.

The second five goals were established to address the needs of employers. One of the ways success of the program is determined is through support of the program by industry and the employment of graduates. Therefore goals focused on this group will help insure a successful program.

The last five goals were established to address the needs of the University. The faculty understands the need to work within and support the mission of the University. The Automotive Department is one small part of the University, but is dedicated to work with other departments to keep the University strong and successful.

3) How do the goals apply to preparing students for careers in and meeting employer needs in the community, region, and/or marketplace?

The AET graduate must possess at least two skill sets: Automotive Service Technology and Engineering Technology. The AUSV graduate must possess the Automotive Service Technology skill set. The goals are defined to achieve these skill sets.

4) Have the goals changed since the last program review? If so, why and how? If not, why not?

The AET Program is undergoing its second Program Review. The goals have been changed to better match the ABET requirements for accreditation. AUSV still maintains NATEF standards for certification.

5) **Describe the relationship of the program goals to the University's mission, and the departmental, college and divisional strategic plans.**

The AET program has quickly become a national leader amongst the ranks of AET programs. All faculty, actively teaching in the AET program, utilize all available innovative teaching tools. The program has been highly successful in preparing students as they graduate to their careers.
The AET program has been a model of success for the College of Technology. The comprehensive curriculum has resulted in a program which provides it's graduates with cutting-edge skills in the latest of automotive technologies. The program has been responsible for attracting near record number of students to the Automotive department which has benefited the Automotive Service Technology (AST) and Automotive-Heavy Equipment Management (AHEM) programs as well.

Section 1 - B. Program Visibility and Distinctiveness

1) **Describe and assess the program's ability to attract quality students.**

The FSU AET program is one of two programs nationwide that are true AET programs. Of the total student composition of the AET program, 57% come from states other than Michigan and/or out of country. This truly makes the AET program a highly diverse international program.

Several components make the AUSV program unique, including a service floor for second year students. The service floor is run as a business, providing service for and contact with the community. The realistic experience is a valuable component of the program for our graduates.

2) Identify the institutions that are the main competitors for prospective students in this program.

Most visiting students have conveyed that they have chosen to visit Minnesota State – Mankato and FSU. Very often we are chosen, with our facility and faculty being cited as the primary reasons.
The other main competitor is Pittsburg State University in Pittsburg, Kansas. Their curriculum has changed drastically over the past few years. The courses in their curriculum are more automotive management oriented than engineering technology oriented.

Competitors of the department include "For-profit" institutions such as UTI (Universal Technical Institute), Lincoln Tech, Wyoming Tech, University of Northwestern Ohio, Baker College and Nashville Auto Diesel. There are several community colleges with competitive automotive programs including Delta College, Henry Ford Community College, Mid-Michigan Community College, Grand Rapids Community College and Lansing Community College.

3) How are these programs similar and different from the FSU program?

FSU AET students in general, currently receive the same Automotive Service Technology training as those students who wish to complete the Associates degree and pursue a career in Automotive Service. This component of our program produces a very technically competent student. Neither Mankato nor Pittsburg do this. The automotive service courses are unique to their bachelors programs and do not possess the same depth of subject matter as FSU courses. Also, FSU AET courses in the third and fourth years provide in-depth studies into air induction, engine dynamometer testing, emissions, and alternative fuels. Our competitors offer nothing similar.

For AUSV, the programs are similar in that they all offer automotive training. There are some differences. Tuition at Ferris remains significantly higher than community colleges though competitive with “for-profit" institutions. With regards to degree, “for-profit" institutions fail to offer general education or an Associate’s degree. While community colleges do offer an Associate’s degree, they do not offer continuation into a related Baccalaureate program. It should be noted that our departmental Baccalaureate automotive programs do accept a significant number of transfer students from both community colleges and profit" institutions. With regard to schedule format, many of the "for “for-profit" institutions run students on a module or quarter schedule while Ferris runs a semester schedule. Being a full University, Ferris offers many opportunities for students that competitors cannot offer, including NCAA athletic events, housing and dining services, counseling services and numerous social and cultural events.

4) **What can be learned from them that would improve the program at Ferris?**

It is absolutely essential they we maintain ABET accreditation.

Many competitors have full-time recruiters dedicated strictly to their automotive programs. This includes both “for-profit” institutions and the University of Northwestern Ohio. The recruiters are highly motivated to secure students regardless of program outcomes or quality. Both "for-profit" and community colleges appear to have stronger monetary investments in facilities and equipment. To potential students touring several automotive school facilities, Ferris will appear less equipped and possibly antiquated. A combination of strong investment and less bureaucracy allows other institutions to more quickly adjust to market demands. For example, Lansing Community College has a program for alternative fuel vehicle technicians while we do not. The competition's combination of strong financial investment in equipment coupled with aggressive recruiting represent a real danger to the future viability of the Ferris Automotive Service program as a stand-alone entity.

Section 1 - C. Program Relevance

1) **Provide a labor market demand analysis: This activity is designed to assess the marketability of future graduates. Reports from the Department of Labor and from industry are excellent sources for forecasting demand on graduates. Request information from your Library Liaison.**

The employment opportunities for Automotive Engineering Technology graduates on nationwide employment statistics, fall under the general category of Engineering Technicians, SOC Code 17-3029 on the National Employment Matrix. According to the US Bureau of Labor Statistics, Engineering Technicians have a forecasted nationwide increase in the number of positions of 11,236 between the years 2004 and 2014, representing an increase of 12.32%. Projections in the Occupation Outlook Handbook indicate

that the growth in this field may go as high as 17% making the number of available positions 15,503 by the year 2014.
(http://www.bls.gov/emp/empiols.htm) (http://www.bls.gov/oco/ocos112.htm)

The employment opportunities for Automotive Engineering Technology graduates on statewide employment statistics fall under the following categories: Electrical/Electronic Engineering Technicians SOC Code 17-3023, Electro-Mechanical Technicians SOC Code 17-3024, Environmental Engineering Technicians SOC Code 17-3025, Industrial Engineering Technicians SOC Code 17-3026, and Mechanical Engineering Technicians SOC Code 17-3027. The State of Michigan Department of Labor forecast for

years 2002-2012 is an average of 18.4% growth for all of the above listed employment areas. This translates into 1,980 jobs during this period in the state of Michigan alone. Average annual openings statewide for the listed employment areas are 464, which include 197 new jobs and 272 replacement workers (http://www.michlmi.org/LMI/occ_proj/occ_02.htm).

According to the U S Bureau of Labor Statistics, automotive service technicians/mechanics, job number 49-3023 have a forecasted nationwide increase in the number of positions of 125,687 between the years 2004 and 2014,representing an increase of 15.6%. Accompanied with these statistics is the statement "opportunities should be very good for automotive service technicians and mechanics with diagnostic and problem-solving skills, knowledge of electronics and mathematics, and mechanical aptitude" (http://www.bls.gov/emp/empiols.htm).

The State of Michigan Department of Labor refers to automotive technicians/ mechanics as job title 49-3023.The forecast for years 2002-2012 is a 10.8% level of growth. This translates into 2780jobs during this period. Average annual openings statewide are 966, which include 278 new jobs and 688 replacement workers (http://www.michlmi.org/LMI/occ proj/occ 02.htm).

2) Describe and assess how the program responds to emerging issues in the discipline, changes in the labor force, changes in employer needs, changes in student needs, and other forces of change.

For both AET and AUSV, input received from the program constituents is assessed by the faculty and advisory committee. The conclusions of these groups are forwarded to the School Director and Curriculum Committee for action.

3) Assess why students come to FSU for the program. Summarize the results of the graduate exit survey and the student program evaluation.

There are currently two actual Automotive Engineering Technology programs in the United States: FSU's and Minnesota State University's. Both the FSU and MSU program are ABET accredited. Prospective students who tour our program also tour MSU and state a preference for our facility and curriculum. Our continuation of ABET accreditation and program review should ensure our status as the top program in the nation.

Overall, the AUSV program gets good marks from current students and recent graduates. The Ferris Automotive Service program has a solid reputation in the automotive repair industry. Many prospective students are likely to hear positive recommendations about the Ferris automotive center from vocational teachers and those employed in automotive repair shops throughout the region.

4) How well does the program meet student expectations?

Students who responded to the Alumni survey are employed by Detroit Diesel, Land Rover, Hegenscheight-MFD Corporation, and Ferris State University. All respondents are employed at or above the level of an entry level engineering technologist or automotive service technician.

5) How is student sentiment measured?

Student representation on the AET/AUSV Advisory Committee, SAI, Student survey, Graduating student survey, Alumni survey, feedback from Advisors and Professors.

Section 1 - D. Program Value

1) Describe the benefit of the program, facilities, and personnel to the University.

The Automotive Engineering Technology Program at Ferris State University enables the University to offer technically driven Bachelors Degree in Automotive Engineering Technology, combining the depth of Automotive Technology with the breadth of Engineering.

The facilities benefit the University by providing classrooms and labs for not only AET students, but, for students in Auto Service and other majors. The personnel of the AET Program provide a high quality education for the students of Ferris, while maintaining and upholding the positive role of Ferris with business and industry as well as in the educational community.

2) Describe the benefit of the program facilities, and personnel to the students enrolled in the program.

The Automotive Engineering Technology Program at Ferris State University provides a solid education in Automotive Technology and adds to that foundation the knowledge and skills needed to be successfully employed in the servicing, engineering and testing companies of the Transportation Industry. The facilities allow the student real world opportunities to learn in a variety of settings.

Students are taught in comfortable classrooms with access to the latest projection technologies and wireless internet. Students are also given the opportunity to learn in service bay settings while dealing with the whole automobile. The service bay also includes a chassis dynamometer where students may run tests on the vehicle while simulating various driving

conditions. Labs dedicated to specific aspects of the students' education are in place to allow students to concentrate on those areas. The Survey of the Faculty does suggest that the program could be strengthened and augmented by the replacement of some older pieces of equipment and the addition of some new equipment. The Engine Dynamometer software, originally installed when the building was constructed, is DOS based and needs to be updated. The software is no longer supported by the manufacturer. If the software fails, we will lose the use of the engine dynamometer. The Faculty of the AET Program provides students with above average instruction as well as the benefit of years of experience in all aspects of the Transportation Industry.

3) What is the assessment of program personnel of the value of the program to employers? Explain how is this value is determined.

The value of the program to employers is determined in through the advisory committee and information gathered with surveys to employers. The advisory committee is responsible for providing the guidance that ensures that the program will continue to offer graduates with experiences and skills valuable to employers. The value of the program is also determined through the close relationships maintained with the Transportation Industry by the Faculty with past graduates and Companies benefiting from the skills of participants in the internship program. Key insights are gained through the interactions between the companies that employ AET/AUSV Interns and Faculty that provide information on industry needs.

4) Describe the benefit of the program, faculty, staff and facilities to entities external to the University (services that faculty have provided to accreditation bodies, and regional, state, and national professional associations; manuscript reviewing; service on editorial boards; use of facilities for meetings, etc.).

The internship requirement is the provision for work experience; it benefits employers throughout North America by providing them with an opportunity to have highly skilled additions to their workforce on an intern basis. The employers can benefit from the skills of these students and determine if they would like to hire them on for a permanent position.

The AET/AUSV Programs are active in the Society of Automotive Engineers, participating in the Baja vehicle project and the Indy car project. These projects challenge students to design and build vehicles for competition against other schools in cooperation with students from The Mechanical Engineering Technology.

5) What services for extra-University general public groups (e.g., presentations in schools or to community organizations) have faculty,

staff or students provided? Describe how these services benefit students, program, and community.

The AET Program through its Auto Service foundation provides auto repairs on the service floor of the Automotive Building. The service floor provides auto repairs for Ferris students, Faculty, Staff, and the general public without a labor charge.

The Faculty provides update training for high school instructors in the spring at no cost to the instructors. The training helps high school instructors keep up with changes in the auto industry and provides them with a familiarity with Ferris State University and what is offered here.

Section 2
Collection of Perceptions

Section 2 – A. Graduate Follow-Up Survey

The purpose of this activity is to learn from the graduates their perceptions and experiences regarding employment based on program outcomes. The goal is to assess the effectiveness of the program in terms of job placement and preparedness of the graduate for the marketplace.

1) Technique

Electronic survey circulated by e-mail.

2) Effectiveness

Surveys were e-mailed. Thirty-one were completed successfully. The AET and AUSV Alumni were combined together by the Program Review Committee as part of their study.

3) Responses

AET/AUSV APR...Alumni

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N		Mean	Median	Std. Deviation
	Valid	Missing			
q1 Year graduated	31	0			
q2 Number of yrs attended FSU	31	0			
q3 Attained ASE certification	31	0	1.52	2.00	.508
q4 In how many Automotive areas	31	0			
q5 In how many Diesel/Truck areas	31	0			
q6 Rate the value of ASE certification	31	0	1.71	1.00	.902
q7 Do you have/required to have any other certifications/licenses	31	0	1.71	2.00	.461
q8 Issuing Body and Area	31	0			
q9 Did FSU and the AET/AUSV program prepare you successfully to compete in job mkt	31	0	1.26	1.00	.445
q10 Please elaborate	31	0			
q11 Name of the company you are currently working for	31	0			
q12 Address of the company	31	0			
q13 City, State	31	0			
q14 Email	31	0			
q15 How long have you been employed there	31	0			
q16 Present position/job title	31	0			
q17 Is your current position related to your major area of study	31	0	1.13	1.00	.341
q18 Please elaborate on your response to the previous question	31	0			
q19 Starting salary range	31	0	4.16	4.00	.898
q20 Present salary range	31	0	4.77	5.00	1.309
q21 How many promotions have you received	31	0	1.65	1.00	.950
q22 What is difficult to find a job in your major area	31	0	1.48	1.00	.508
q23 Please elaborate on your answer to Q21 and include how long it took	31	0			
q24 How effective was your course work in preparing you for work	30	1	2.83	3.00	.834
q25 What changes, if any, do you think	31	0			

should be made					
q26 Was the equipment used in our courses adequate	31	0	1.35	1.00	.486
q27 What recommendations, if any, would you make regarding changing	31	0			
q28 What courses could be added to our program that would have better prepared you	31	0			
q29 What software or computer programs do you currently use	31	0			
q30 Planning on attaining additional degrees	19	12	2.79	3.00	.535
q31 In what area	31	0			
q32 Are you attending, or have you attended, any courses since graduating	31	0	1.74	2.00	.445
q33 Source	7	24	1.71	2.00	.488
q33.a Other specified	31	0			
q34 Type	31	0			
q35 How often	31	0			
q36 Area of industry	31	0			
q37 Additional comments	31	0			

Frequency Table

q1 Year graduated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	07	1	3.2	3.2	3.2
	08	2	6.5	6.5	9.7
	2006	1	3.2	3.2	12.9
	2007	3	9.7	9.7	22.6
	2008	7	22.6	22.6	45.2
	2009	1	3.2	3.2	48.4
	2010	8	25.8	25.8	74.2
	2011	8	25.8	25.8	100.0
	Total	31	100.0	100.0	

q2 Number of yrs attended FSU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	7	22.6	22.6	22.6
	2.5	1	3.2	3.2	25.8
	3	7	22.6	22.6	48.4
	3.5	2	6.5	6.5	54.8
	4	10	32.3	32.3	87.1
	4.5	2	6.5	6.5	93.5
	5	1	3.2	3.2	96.8
	6	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q3 Attained ASE certification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	48.4	48.4	48.4

	No	16	51.6	51.6	100.0
	Total	31	100.0	100.0	

q4 In how many Automotive areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	22.6	22.6	22.6
	?	1	3.2	3.2	25.8
	0	5	16.1	16.1	41.9
	4	3	9.7	9.7	51.6
	5	2	6.5	6.5	58.1
	6	2	6.5	6.5	64.5
	7	1	3.2	3.2	67.7
	8	2	6.5	6.5	74.2
	a1-a8	1	3.2	3.2	77.4
	A1-A8	1	3.2	3.2	80.6
	A1-A8, M1-M3	1	3.2	3.2	83.9
	eight	1	3.2	3.2	87.1
	I passed 5 ASE tests but did not aquire the needed experience to be certified	1	3.2	3.2	90.3
	Master, Parts & L1	1	3.2	3.2	93.5
	None	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

q5 In how many Diesel/Truck areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		10	32.3	32.3	32.3
	0	16	51.6	51.6	83.9
	4	1	3.2	3.2	87.1
	6	1	3.2	3.2	90.3
	none	1	3.2	3.2	93.5

	None	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

q6 Rate the value of ASE certification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not necessary	16	51.6	51.6	51.6
	Somewhat valuable	10	32.3	32.3	83.9
	Valuable	3	9.7	9.7	93.5
	Essential	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

q7 Do you have/required to have any other certifications/licenses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	29.0	29.0	29.0
	No	22	71.0	71.0	100.0
	Total	31	100.0	100.0	

q8 Issuing Body and Area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		26	83.9	83.9	83.9
	Dot, I had to obtain a commercial drivers license	1	3.2	3.2	87.1
	FSU	1	3.2	3.2	90.3
	State of michigan	1	3.2	3.2	93.5
	State of Michigan	1	3.2	3.2	96.8
	State of Michigan, Automotive Mechanic	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q9 Did FSU and the AET/AUSV program prepare you successfully to compete in job mkt

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	23	74.2	74.2	74.2
	No	8	25.8	25.8	100.0
	Total	31	100.0	100.0	

q10 Please elaborate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	25.8	25.8	25.8
	Employers are looking for an actual Engineering Degree not a Technology Degree. People with Engineering degrees are looked at for Engineering positions as where	1	3.2	3.2	29.0
	Extraciricuar activites (Ferris Formula) prapared me for the current job market, the AET program has had absolutley no influence on my current position and has failed to prepare me for the current job market.	1	3.2	3.2	32.3
	FSU's AET program provided a strong foundation to allow me to jump into the job market. One key factor in the current job market is "experience" - in which my junior summer internship helped tremendously. All elements of the program were important in developing into a young professional. Math, statistics!, physics, english and speaking, and of course, our auto classes - all hugely important.	1	3.2	3.2	35.5
	Great job preparing myself, I am currently selling used Heavy trucks but my mechanical background helps out immensley.	1	3.2	3.2	38.7
	I fell short of the demands needed for the	1	3.2	3.2	41.9

	market when I finished all my course work in 2008. I couldn't find an internship for 2 years in order to technically receive my BS degree. Many employers demanded at least 2 years of experience or Auto CAD knowledge and/or experience. I would highly recommend to implement design courses as part of the program and not an elective. Each course that is currently in the program should have hands on training for the real world and not just all theory. Equipment being used in these classes should be up to date, not out of date.				
	I felt ready for the current job market. However, I believe that more engineering classes that are relevant to modern jobs would be a useful addition. Such classes as emissions, alternative fuels, and automotive fuels and lubes could all be combined into one class in my opinion.	1	3.2	3.2	45.2
	I have been working for 4 years now and still use knowledge gained at FSU in my current job.	1	3.2	3.2	48.4
	I received an education in a wide array of topics - including automotive knowledge, technical writing, and time management.	1	3.2	3.2	51.6
	I was able to gain employment as a Product Development Engineer and immediately be a productive employee.	1	3.2	3.2	54.8
	If someone is looking to be a tech it did a great job, if someone is looking to be an engineer it is lacking.	1	3.2	3.2	58.1
	My current job requires a lot of technical background as well as quality engineering background and my degree gave me a strong base for this job.	1	3.2	3.2	61.3
	No, many positions I applied for desired experience in classes that Ferris State did not require. Auto CAD being one of the big ones. In addition the chassis dynamometer facility	1	3.2	3.2	64.5

	was not in operation while I attended Ferris and Ferris does nothing to place students into internships. It took me over a year just to find an unpaid internship and what makes matters worse is that I was unable to officially graduate until the internship was completed. I have spoken to many other students in the AET program and they had just as difficult a time finding an internship, let alone a job after completion of the internship.				
	Quality and Test Areas.	1	3.2	3.2	67.7
	Taking the AET program allowed me multiple career options after graduating. Due to the technical writing that they included I was able to be placed in a writing atmosphere on automotive products and platforms.	1	3.2	3.2	71.0
	The AET program got me nothing. i work in construction now. part because the job market, part because it was the wrong degree for my goals, part because i'm canadian.	1	3.2	3.2	74.2
	the AET program is designed to be engineering oriented, the minimum requirements on math, physics, and thermodynamics are not nearly high enough for most engineering positions.	1	3.2	3.2	77.4
	The AET was sufficient in preparing me for a job in the engineering technology field. I must give credit to Ferris State University for helping me get where I am today.	1	3.2	3.2	80.6
	The classes that were required were very helpful and touched on all the necessary areas of the automotive industry.	1	3.2	3.2	83.9
	The Degree seems to right in the middle of an engineerer posistion and a tech position	1	3.2	3.2	87.1
	The program teaches students many useful skills that can be used in industry. But there needs to be more focus on learning design programs such as CATIA V5 or Solid Works.	1	3.2	3.2	90.3

	I had to take PRO Engineering for a design class which is useless in the Automotive Industry because the big three use CATIA or Solid Works. The quality certificate is very useful and gives AET grads an advantage over other technical degree grads.				
	The program was decently designed for someone working the automotive field, however more program management courses may be helpful.	1	3.2	3.2	93.5
	The service program provided me with the ability to diagnose a problem, and take action to correct the problem. The management helped with how a business Gould be run and the metrics to use in running a successful business. For my current position I wish I would have taken more fleet management courses and leadership classes.	1	3.2	3.2	96.8
	There was no job market for engineers when i got out of college	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q11 Name of the company you are currently working for

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	3.2	3.2	3.2
	AM General	1	3.2	3.2	6.5
	American Honda	1	3.2	3.2	9.7
	Autoliv	1	3.2	3.2	12.9
	Chrysler Group LLC	1	3.2	3.2	16.1
	Contracted to Parker Hannifin	1	3.2	3.2	19.4
	Cummins	2	6.5	6.5	25.8
	Cummins Filtration	1	3.2	3.2	29.0
	Cummins Inc.	1	3.2	3.2	32.3
	Cummins, Inc	1	3.2	3.2	35.5

	Dykstra's Auto Service	1	3.2	3.2	38.7
	Eaton Corp.	1	3.2	3.2	41.9
	Ford Proving Grounds	1	3.2	3.2	45.2
	General Motors	3	9.7	9.7	54.8
	GHSP	1	3.2	3.2	58.1
	Johnson Control	1	3.2	3.2	61.3
	Kiewit	1	3.2	3.2	64.5
	MHC-Kenworth	1	3.2	3.2	67.7
	Murphy Hoffman company	1	3.2	3.2	71.0
	Navistar	2	6.5	6.5	77.4
	Pridgeon and Clay, INC	1	3.2	3.2	80.6
	Raytheon	1	3.2	3.2	83.9
	Stillwell Ford Lincoln	1	3.2	3.2	87.1
	The Tool and Gage House	1	3.2	3.2	90.3
	TRW Automotive	1	3.2	3.2	93.5
	Tweddle Litho	1	3.2	3.2	96.8
	Yamaha Motor Mfg. Corp.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q12 Address of the company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	25.8	25.8	25.8
	-	1	3.2	3.2	29.0
	1000 Bullsboro Dr.	1	3.2	3.2	32.3
	1000 Chrysler Dr.	1	3.2	3.2	35.5
	1250 Beachtree	1	3.2	3.2	38.7
	1301 S. Hamilton Circle	1	3.2	3.2	41.9
	13100 E MICHIGAN AVE	1	3.2	3.2	45.2
	1320 Pacific Dr.	1	3.2	3.2	48.4
	1600 n cording ton ave	1	3.2	3.2	51.6
	1900 McKinley	1	3.2	3.2	54.8
	1919 Technology Drive	1	3.2	3.2	58.1
	1919 Torrance Blvd	1	3.2	3.2	61.3

	24700 Maplehurst	1	3.2	3.2	64.5
	2701 Navistar Dr.	1	3.2	3.2	67.7
	3300 General Motors Rd.	1	3.2	3.2	71.0
	3780 carleton road	1	3.2	3.2	74.2
	4505 26 Mile Rd	1	3.2	3.2	77.4
	50 Cottage Grove SW	1	3.2	3.2	80.6
	500 Jackson Street	1	3.2	3.2	83.9
	5180 37th Ave.	1	3.2	3.2	87.1
	538 E. Hebron St	1	3.2	3.2	90.3
	708 S. Byrkit Ave.	1	3.2	3.2	93.5
	Cummins Filtration, 1801 Hwy 51/138	1	3.2	3.2	96.8
	Technical Center	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q13 City, State

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	9.7	9.7	9.7
	-,-	1	3.2	3.2	12.9
	Auburn Hills MI 48326	1	3.2	3.2	16.1
	Auburn Hills, MI	1	3.2	3.2	19.4
	Charlotte, NC	1	3.2	3.2	22.6
	Clinton Township, MI	1	3.2	3.2	25.8
	Columbus Indiana	1	3.2	3.2	29.0
	Columbus, IN	3	9.7	9.7	38.7
	Galesburg	1	3.2	3.2	41.9
	Grand Haven, MI	1	3.2	3.2	45.2
	Grand Rapids, MI	1	3.2	3.2	48.4
	hillsdale,mi	1	3.2	3.2	51.6
	Hudsonville, MI 49426	1	3.2	3.2	54.8
	Kansas city mo	1	3.2	3.2	58.1
	Lisle, IL	1	3.2	3.2	61.3
	Melrose Park, IL	1	3.2	3.2	64.5

	Milford, MI	1	3.2	3.2	67.7
	Mishawaka, IN	1	3.2	3.2	71.0
	Newnan, GA	1	3.2	3.2	74.2
	Northwood, OH	1	3.2	3.2	77.4
	olathe, KS	1	3.2	3.2	80.6
	Stoughton, WI 53589	1	3.2	3.2	83.9
	Torrance, CA	1	3.2	3.2	87.1
	Troy, MI	1	3.2	3.2	90.3
	Warren	1	3.2	3.2	93.5
	Warren, Mi	1	3.2	3.2	96.8
	Washington, MI	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q14 Email

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		11	35.5	35.5	35.5
	Ben.Toft@yahoo.com	1	3.2	3.2	38.7
	bryce@dykstrasauto.com	1	3.2	3.2	41.9
	Dont think so	1	3.2	3.2	45.2
	Dulaneyb@live.com	1	3.2	3.2	48.4
	eas34@chrysler.com	1	3.2	3.2	51.6
	ernest_chev@yahoo.com	1	3.2	3.2	54.8
	Hutchind@GHSP.com	1	3.2	3.2	58.1
	james.bailey@navistar.com	1	3.2	3.2	61.3
	john.owens@gm.com	1	3.2	3.2	64.5
	jon.vanderbossche@autoliv.com	1	3.2	3.2	67.7
	jordanfilip@gmail.com	1	3.2	3.2	71.0
	katkem@ferris.edu	1	3.2	3.2	74.2
	N/A	1	3.2	3.2	77.4
	Ryan.W.Washington@GM.com	1	3.2	3.2	80.6
	seth.zombory@amgeneral.com	1	3.2	3.2	83.9

	siddiqi.kazim@hotmail.com kazim.siddiqi@cummins.com	1	3.2	3.2	87.1
	steadyed47@hotmail.com	1	3.2	3.2	90.3
	stillwell@dmci.net	1	3.2	3.2	93.5
	tim.cahoon@mhctruck.com	1	3.2	3.2	96.8
	vanalst@ferris.edu	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q15 How long have you been employed there

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	3.2	3.2	3.2
	1	1	3.2	3.2	6.5
	1 1/2 yrs.	1	3.2	3.2	9.7
	1 year	2	6.5	6.5	16.1
	1 Year	1	3.2	3.2	19.4
	10 months	1	3.2	3.2	22.6
	16 months	1	3.2	3.2	25.8
	2 years	3	9.7	9.7	35.5
	2 Years	1	3.2	3.2	38.7
	2yrs	1	3.2	3.2	41.9
	3 Months	1	3.2	3.2	45.2
	3 years	2	6.5	6.5	51.6
	3.5 years	1	3.2	3.2	54.8
	4 months	1	3.2	3.2	58.1
	4 years	2	6.5	6.5	64.5
	5 months	1	3.2	3.2	67.7
	5 years	2	6.5	6.5	74.2
	9 months	1	3.2	3.2	77.4
	less than 1 year	1	3.2	3.2	80.6
	one year	1	3.2	3.2	83.9
	Over a year	1	3.2	3.2	87.1
	since 6/11	1	3.2	3.2	90.3
	Since May of 2011	1	3.2	3.2	93.5

	Started last May as an intern and was hired direct in December	1	3.2	3.2	96.8
	Three months	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q16 Present position/job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	3.2	3.2	3.2
	Application Engineer	1	3.2	3.2	6.5
	Assistant director of maintenance.	1	3.2	3.2	9.7
	Associate Product Development Engineer, Global OEM Air	1	3.2	3.2	12.9
	Automation Test Engineer	1	3.2	3.2	16.1
	CAT Griffin Site Manager	1	3.2	3.2	19.4
	Customer Service Coordinator.	1	3.2	3.2	22.6
	District Parts and Service Manager	1	3.2	3.2	25.8
	District Sales & Service Manager	1	3.2	3.2	29.0
	Engineering Technician	1	3.2	3.2	32.3
	Equipment Engineer	1	3.2	3.2	35.5
	Field Service Engineering	1	3.2	3.2	38.7
	Manager - Diagnostic Tool Support	1	3.2	3.2	41.9
	Mechanical engineering technician	1	3.2	3.2	45.2
	Mechanical Engineering Technician	3	9.7	9.7	54.8
	Performance Engineer	1	3.2	3.2	58.1
	Product Development Engineer	1	3.2	3.2	61.3

	Project Engineer	1	3.2	3.2	64.5
	Quality Facilitator	1	3.2	3.2	67.7
	Quality Tech	1	3.2	3.2	71.0
	R&D Project Engineer	1	3.2	3.2	74.2
	Service Manager	1	3.2	3.2	77.4
	Service Manual Manager	1	3.2	3.2	80.6
	service Readiness Manager, Customer Support Operations	1	3.2	3.2	83.9
	Shop foreman	1	3.2	3.2	87.1
	Student	1	3.2	3.2	90.3
	Technical Writer	1	3.2	3.2	93.5
	Test Engineer	1	3.2	3.2	96.8
	Truck Sales	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q17 Is your current position related to your major area of study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	87.1	87.1	87.1
	No	4	12.9	12.9	100.0
	Total	31	100.0	100.0	

q18 Please elaborate on your response to the previous question

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	22.6	22.6	22.6
	Attending Great Lakes Maritime Academy with Ferris Business Degree option	1	3.2	3.2	25.8
	Automotive stamping and testing, although no sheet metal stamping knowledge was gained at FSU AET. I feel like this should be incorprated into an AET program.	1	3.2	3.2	29.0
	Diesel engineering is completely different	1	3.2	3.2	32.3

	than automotive engineering. I may have applied only 5% of what I have learned in the AET program, which is mainly from my elective courses in Manufacturing Engineering.				
	From Quality, I have quality certificate from FSU. I did a lot of Green Belt projects and the classes from Ferris helped me a lot. From Testing, I have Engine High Performance Testing certificate from FSU. I do the customer required quality tests.	1	3.2	3.2	35.5
	I am currently in a corporate position managing a fleet of class 6-8 lease and rental rucks	1	3.2	3.2	38.7
	I am currently the Chrysler Manager responsible for diagnostic tool support to our Dealer Network body. This position involves diagnostic tool experience with our new CAN architecture and previously used protocol vehicles, customer relations, working with our development and authoring teams to improve quality, and being the front line of tool support to our dealers. Reporting to the Head of Service Diagnostics. Position is pretty close to my area of study; close enough in this market!	1	3.2	3.2	41.9
	I deal with automotive parts and engineering them to meet customer needs	1	3.2	3.2	45.2
	I design airbags. There was no class that ever went into detail about airbags.	1	3.2	3.2	48.4
	I graduated from the Automotive Management program, and now I manage the technicians in the shop.	1	3.2	3.2	51.6
	I have two degrees, one in AET and the other is PDET. I am using more of my PDET degree than my AET, but the AET still helped.	1	3.2	3.2	54.8
	I lead a team of authors to develop and write service mechanical procedures for Chrylser	1	3.2	3.2	58.1

	products.				
	I run dyno tests on diesel engines which creates fuelmaps.	1	3.2	3.2	61.3
	I use skills learned while completing the Quality Science Certificate daily while working on; FMEA, Basic Stats, SPC, DOE, GD&T. The skills I learned while diagnosing faults in cars during the Associate's program has been useful in determining how to prevent failures while developing new products. Concepts of air flow has been a big part of designing Air Intake Systems	1	3.2	3.2	64.5
	I was placed in the automotive field, so therefore I feel my current position is related to my major area of study.	1	3.2	3.2	67.7
	I work in a Battery Test Lab and perform the technical support duties needed for the development and validation testing of the batteries for our hybrid and electric vehicles.	1	3.2	3.2	71.0
	I work in the Automotive Field as a Brake Performance Engineer. I went to school to become an Engineer in the automotive field.	1	3.2	3.2	74.2
	It is exactly in line with what i studied in school.	1	3.2	3.2	77.4
	My current position is somewhat related to area of study however more emphasis was put on gasoline engines. I now work with diesels.	1	3.2	3.2	80.6
	my degree has helped me understand the entire dealership aspect of my job and has made me- Automotive mgmt	1	3.2	3.2	83.9
	my education was design and testing my job is more maintenance and planning.	1	3.2	3.2	87.1
	technical support for Eaton automated transmissions.	1	3.2	3.2	90.3
	Testing and reseach on Hydrolic Hybrid transmissons	1	3.2	3.2	93.5
	This is an automotive manufacture	1	3.2	3.2	96.8

	Yes, my position deals a lot with bolted joints and tooling. My degree gave me a good base to start with.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q19 Starting salary range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$20,001 - $30,000	1	3.2	3.2	3.2
	$30,001 - $40,000	6	19.4	19.4	22.6
	$40,001 - $50,000	12	38.7	38.7	61.3
	$50,001 - $60,000	11	35.5	35.5	96.8
	$60,001 - $70,000	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q20 Present salary range

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$20,000 or less	1	3.2	3.2	3.2
	$30,001 - $40,000	2	6.5	6.5	9.7
	$40,001 - $50,000	8	25.8	25.8	35.5
	$50,001 - $60,000	14	45.2	45.2	80.6
	$60,001 - $70,000	5	16.1	16.1	96.8
	$90,001 - $100,000	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q21 How many promotions have you received

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	19	61.3	61.3	61.3
	1	6	19.4	19.4	80.6
	2	4	12.9	12.9	93.5

	3	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

q22 What is difficult to find a job in your major area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16	51.6	51.6	51.6
	No	15	48.4	48.4	100.0
	Total	31	100.0	100.0	

q23 Please elaborate on your answer to Q21 and include how long it took

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	19.4	19.4	19.4
	1st promotion was within 10 months and the 2nd came 2 yrs later.	1	3.2	3.2	22.6
	After 2 years there were company wide raises for salaried workers. There has also been significant profit sharing the last two years.	1	3.2	3.2	25.8
	Could not find a dealership willing to pay me what I was worth. Had several offers for Diesel/Heavy truck that paid well.	1	3.2	3.2	29.0
	I applied to many 'engineer' positions, but soon realized that my degree didn't quite give me 'engineer' status	1	3.2	3.2	32.3
	I assume what was supposed to be was. and no, I had multiple offers.	1	3.2	3.2	35.5
	I had multiple interviews and one job offer before graduation. I was able to turn down a job offer to pursue a job which was more in line with my interests.	1	3.2	3.2	38.7
	I have just recently started my current position. I was an intern since May and got hired direct in December	1	3.2	3.2	41.9

	I have only been with the company for 3 years and due to the struggling economy they were forced to lay off people. So unfortunately, I have not been given a promotion. However, I am just thankful to be employed.	1	3.2	3.2	45.2
	I turned down a promotion to become a support engineer around four months after I started, and now I am currently in the process of transfering to an engineering position.	1	3.2	3.2	48.4
	I was able to find a job immediatly follwoing school, but the choices were very limited. I had to relocate and take a contractor position I was not happy with.	1	3.2	3.2	51.6
	I was able to find a position 7 months before I graduated	1	3.2	3.2	54.8
	I was hired 6 mos before graduation after my bachelors in Automotive Mgmt was completed	1	3.2	3.2	58.1
	I was promoted to Engineering Technician after working 6 months and then promoted to Application Engineer after 3 months.	1	3.2	3.2	61.3
	I've been in the same position since the start of my site manager position. I have received one raise since my start.	1	3.2	3.2	64.5
	I've only been here for 5 months.	1	3.2	3.2	67.7
	In order to be promoted I had to move companies 3 times in the course of 2 years. First few jobs out of school were not directly related to what I went to school for.	1	3.2	3.2	71.0
	It took me two months to find an internship after graduation, then I was unemployed for one month when the internship ended. I worked for a year at GM, was downsized, then found another job 2 weeks later.	1	3.2	3.2	74.2
	It took over 2 years before i was able to find a job. there just was not any engineering when i graduated	1	3.2	3.2	77.4

	It was not extremely difficult but still took a lot of time and searching to find one.	1	3.2	3.2	80.6
	It was not too difficult to find a professional career job in my area after graduation, in part due to my internship experience and prior dealership experience. I believe those combined well with my degree to launch me into the market successfully. I was working 1 month after graduating.	1	3.2	3.2	83.9
	might get promoted in a 5ish months	1	3.2	3.2	87.1
	N/A	1	3.2	3.2	90.3
	No promotions received. Took me a year and a half to find an unpaid internship/job.	1	3.2	3.2	93.5
	Over a year	1	3.2	3.2	96.8
	They only do promotiions on a yearly basis	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q24 How effective was your course work in preparing you for work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Ineffective	3	9.7	10.0	10.0
	Somewhat Ineffective	4	12.9	13.3	23.3
	Somewhat Effective	18	58.1	60.0	83.3
	Very Effective	5	16.1	16.7	100.0
	Total	30	96.8	100.0	
Missing	System	1	3.2		
Total		31	100.0		

q25 What changes, if any, do you think should be made

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	19.4	19.4	19.4
	Add a 3-4 credit requirement for "Dealership internship" in the 1st and 2nd years, and	1	3.2	3.2	22.6

	maybe require (2) 3-4 credit internships in the 2nd or 3rd years. I can't stress how important the 'real world' experience is in my opinion. Also, I suggest a class developed or required on vehicle electronic and bus architectures (i.e. CAN, flex ray, etc) for an advanced automotive electronics related course.				
	Add more engineering classes and less focuse on working on cars.	1	3.2	3.2	25.8
	Add more engineering classes such as Auto CAD.	1	3.2	3.2	29.0
	Adding in more mechanical classes for engineering	1	3.2	3.2	32.3
	Courses that deal more with mechanical engineering should be an option for students to choose from.	1	3.2	3.2	35.5
	Diesel/ Heavy truck and Bus, Hybrid stuff	1	3.2	3.2	38.7
	Do not focus soley on the dealership apsect of the automotive industry. There are a lot more jobs out there that are not with a dealership.	1	3.2	3.2	41.9
	Explore the careers in Heavy truck dealerships a little more, I.e Kenworth, Peterbilt, Freightliner, International, Volvo, etc. There is a big demand in these areas.	1	3.2	3.2	45.2
	Focus more on leadership and better techniques to manage a sales force, and a service shop.	1	3.2	3.2	48.4
	Have more requirements for management classes as a general stufy course. Also, have the basic electronics course in the second semester of the first year.	1	3.2	3.2	51.6
	I think many of the classes should be much more Lab based than classroom based. The students should feel as if they are already working for a company such as GM, Ford or Chrysler in one of there many Test Labs. The Engineering Technology role in my view	1	3.2	3.2	54.8

	is based around testing mostly, the students could learn the same skills using real world automotive parts and systems donated from suppliers and automakers to perform labs in a benchmarking and comparison type environment. This teach them everything I learned while at Ferris plus allow me to touch and see it as I am learning it. An example of this is the Airflow class AUTO310, where Mr. Wagner take the intake and cylinder head systems from a Chrysler Hemi, a GM LS engine and a Ford Modular engine and has the student Flow test and benchmark them. Then in AUTO320 Dyno they could dyno all three engines and compare their performance to how the intake system contributed to it. Basically benchmarking which is exactly how th e big three do it. I felt like I sat in a class room the majority of the time while at Ferris. I compare that to sitting at a desk pushing papers which I never do at my current job, I am out there on the lab floor all day setting up and executing testing and performing hands-on engineering tasks. This is why Ferris students stand out in the field, we have excellent hand-on capabilities over a full ME or EE student from Kettering or U of M. I work mostly with those folks.				
	I went for AET, that teaches nothing about diesel or class 6 / class 8 transmission design.	1	3.2	3.2	58.1
	If you attend Ferris for an engineering technology degree, it is a waste to spend two years training to become a technician through the AET program.	1	3.2	3.2	61.3
	More CAD Classes	1	3.2	3.2	64.5
	More emphasis on computer technology in the office. Such as, computer networks, advanced Microsoft Excel and Word (ex.	1	3.2	3.2	67.7

	writing macros), and computer programming. These however, are more engineering areas of study but are definitely plus in being very efficient and impressive in the workplace.				
	More emphasis on Math, Science, and Physics	1	3.2	3.2	71.0
	Need some Manufactory courses.	1	3.2	3.2	74.2
	See answer for Q10.	1	3.2	3.2	77.4
	Some of the 300 & 400 level classes over lapped 100 & 200 level classes	1	3.2	3.2	80.6
	The AET degree either needs to be more Mechanical Engineering based or more managment base. Currently it is in the middle and there is limited work available. The course work should include more software writing and programming, 3D modeling with vizio, more computer managment courses such as Microsoft Project and TeamCenter.	1	3.2	3.2	83.9
	the Microsoft excel course should be a must. Drop at least half of those useless electives. They didn't prepare me in my job at all and the hole reason i'm going to school to be prepared!	1	3.2	3.2	87.1
	The Quality engineering classes are focused on Manufacturing not design. For the AET program, it would be more beneficial to have a quality certificate program specific to new product design and testing. Integration of course work to SAE teams. I would NOT have the job I have now if I would not have been active in the Baja program. Most of the people I work with have held leadership positions on a SAE team in college. I believe being the President of the Baja team increased my starting salary by $13,000 based on my experiences interviewing for various positions.	1	3.2	3.2	90.3
	There is very broad gap between classwork	1	3.2	3.2	93.5

	and real world situations				
	There should be more internships required and Ferris should actually help get students internships. The Program Coordinator should try to find businesses that will take interns every summer. It didn't seem like any teaches helped students find a internship or job besides Kelly Hicks.	1	3.2	3.2	96.8
	Update some of the courses, also cover diesel engines more they seemed almost entirely neglected.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q26 Was the equipment used in our courses adequate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	64.5	64.5	64.5
	No	11	35.5	35.5	100.0
	Total	31	100.0	100.0	

q27 What recommendations, if any, would you make regarding changing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		12	38.7	38.7	38.7
	5 gas analyzers and dynamometer equipment/facilities used at Ferris are far inferior to what is actually used on the job in my current position.	1	3.2	3.2	41.9
	General update to automotive labs. Increased capabilities for SAE teams.	1	3.2	3.2	45.2
	Get the equipment to work, half the time the stuff just did not work	1	3.2	3.2	48.4
	Getting some more updated equipment and some training with CAN communications other than with Scantools for the AET	1	3.2	3.2	51.6

	degree.				
	Have it up to date, not out of date.	1	3.2	3.2	54.8
	I feel in my opinion that the Automotive building has some very nice resources on hand. I would like to see more projects based on the testing, development and validation of an automotive systems designed and built by Ferris Automotive students that they can be proud of. During my time there the same old engine stayed on the engine dyno, no other engines were allowed to be tested. Why isn't this invaluable resource being used in some way to help develop the Formula SAE engine. Why isn't Ferris involved in the Challenge X (Crossover to Sustainable Mobility) Hybrid Vehicle Build Program or the SAE Clean Snowmobile Challenge? Ferris needs to present the students with more opportunities to get out in Public and represent their school and market themselves and these types of competitions do just that. A lot of people I talk to at work say they never heard of my school,"you went to Ferris who-what?" Also make it a requirement that all students participate and contribute eve n in some small way to these programs and competitions every guy will have a skill he is better at than others allow them to branch off and specialize, that is how it happens in real life. Currently it is just volunteers who seem to be the same old bunch of guys all their 4 years with few new ideas and just a lot are arguing about who knows best from what I saw anyways.	1	3.2	3.2	58.1
	i work construction	1	3.2	3.2	61.3
	include a diesel class with AET, require higher levels of math, physics, and thermodynamics.	1	3.2	3.2	64.5

	Like I said, I use more of my PDET degree than than my AET degree.	1	3.2	3.2	67.7
	More up to date equipment	1	3.2	3.2	71.0
	More use of the chassis/engine dynamometers	1	3.2	3.2	74.2
	New stuff	1	3.2	3.2	77.4
	none	1	3.2	3.2	80.6
	Recommend simulating dealership level service department equipment as close as possible. Also, recommend updated factory scan tools (I heard you now have Chryslers wiTECH :)	1	3.2	3.2	83.9
	The entire program must be reconsidered.	1	3.2	3.2	87.1
	The equipment was slightly dated, getting some late model vehicles with new emissions technology would be nice.	1	3.2	3.2	90.3
	The software I had to use was very outdated the computer that was running the DYNO still had windows 95 as its operating system.	1	3.2	3.2	93.5
	Updated equipment to match current working enviorments	1	3.2	3.2	96.8
	We didn't learn the on car brake lathe whicg is the only thing used now.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q28 What courses could be added to our program that would have better prepared you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	19.4	19.4	19.4
	A course on engineering software such as MatLab would be helpful because a lot of positions out there say up front that they want you to be able to use MatLab	1	3.2	3.2	22.6
	Add more advanced	1	3.2	3.2	25.8

	Microsoft Office courses				
	Additional quality engineering classes.	1	3.2	3.2	29.0
	assuming i had gotten a job in automotive design/testing, courses paralleling a mechanical eng or electrical eng degree would have been of some use. Drop that useless Pro/Engineer design program and use AutoCAD like everyone else!	1	3.2	3.2	32.3
	Auto CAD (or other design related courses), at least 3 levels in electrical engineering courses, at least 3 levels in mechanical engineering courses, decrease general education courses.	1	3.2	3.2	35.5
	CAD	1	3.2	3.2	38.7
	CAD and more Math/Science courses. If I could do it over, I would have got an ME degree as it is more versatile and it would not have been nearly as hard to find work.	1	3.2	3.2	41.9
	CAD/3D modeling, Software writing as applicable to automotive, more excel training	1	3.2	3.2	45.2
	CATIA V5 or Solid Works More classes on Hybrid vehicles. More engineering courses such as another material science class,advanced thermodynamics,Solid	1	3.2	3.2	48.4

	works, and FEA.				
	Computer Programming	1	3.2	3.2	51.6
	Computer programming is a big one (MatLab, LabView, Java, C++) all testing requires scripts of code and that is still currently a huge weakness of mine. Also 2d and 3D modeling such as Autocad and Catia which is used regularly is most engineering areas I have seen. AET students should be required to take at least one CAD class. Another good one would be a basic metal welding and fabrication course to expose students to the skills required to design build and fabricate basic fixture required to run tests on components. I use these skills everyday(bandsaw, shear, metal brake, MIG, TIG Alum, Drilling, Tapping, Milling, Lathe)as each new test and component requires a new fixture of some sort. I am one of very few with these skills where I work and they are skills I didn't receive at Ferris!	1	3.2	3.2	54.8
	Design specific Quality courses: Design Failure Mode Effects Analysis, Design for Manufacturing and Assembly, Dimensional Variation Analysis,	1	3.2	3.2	58.1

	Measurement System Analysis for Test Equipment, P-Diagrams, Fault Tree Analysis, Design of Experiments for new product design (currently DOE is only taught from the manufacturing perspective.				
	Diesel and air brake	1	3.2	3.2	61.3
	Diesel/Heavy Equipment	1	3.2	3.2	64.5
	I think you did a thorough job for someone in the automotive testing environment, however possibly more project management courses.	1	3.2	3.2	67.7
	include a diesel class with AET, require higher levels of math, physics, and thermodynamics.	1	3.2	3.2	71.0
	More automotive engineering based programs. Almost every automotive class was a pointless waste of time. Courses must be taught by knowledgeable professors, not technicians.	1	3.2	3.2	74.2
	More manufacturing focuesed classes	1	3.2	3.2	77.4
	Need some Manufactory courses.	1	3.2	3.2	80.6
	One or two courses in the business related program, i.e. intro to business/economics.	1	3.2	3.2	83.9
	Parts Financial Management	1	3.2	3.2	87.1
	People management, more communications, fleet	1	3.2	3.2	90.3

	maintenance courses				
	Sales & Marketing; we all are salesmen wheter we like it or not, if we sell a product or service or sell ourselves	1	3.2	3.2	93.5
	See my response to question #25.	1	3.2	3.2	96.8
	Something with CAN traffic/communication to better ready students for a career in the current automotive market with multiple ECU's per vehicle	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q29 What software or computer programs do you currently use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	19.4	19.4	19.4
	AS/400 Ms outlook, excel, PowerPoint, Microsoft CRM,	1	3.2	3.2	22.6
	AS400, word, excel, Google adwords	1	3.2	3.2	25.8
	CANape, CANalyzer, Microsoft Project, Excel, Word, PowerPoint, Novell Groupwise, LabView	1	3.2	3.2	29.0
	Company owned sowfwares.	1	3.2	3.2	32.3
	Cyflex	1	3.2	3.2	35.5
	Excel, Diadem, IPconf, Microsoft Project, Microsoft Word & PowerPoint	1	3.2	3.2	38.7
	excel, word, i used autocad once (i had to teach myself)	1	3.2	3.2	41.9
	IDEAs, ESPRi-II, SAP	1	3.2	3.2	45.2

	Newbase.				
	Lotus Notes, AutoCAD, Microsoft Excel, Word, Powerpoint, Proprietary Test Software (LabView based computer programming test sofware)	1	3.2	3.2	48.4
	Lotus Notes, Microsoft Office 2010, and CATIA V5	1	3.2	3.2	51.6
	Matlab, MotoTron, Telemmatics	1	3.2	3.2	54.8
	Microsoft Office Suite, Snag It, other general computer software	1	3.2	3.2	58.1
	Microsoft Office Suite, TeamCenter, Quickbase, various web based programs, Microsoft SharePoint, heacy use of Excel	1	3.2	3.2	61.3
	Microsoft Office, Arbor Text, SDL Trisoft, Adobe Pro	1	3.2	3.2	64.5
	Microsoft Office.	1	3.2	3.2	67.7
	Microsoft offices FARO CAM Measure	1	3.2	3.2	71.0
	Microsoft, Catia, Minitab,ect...	1	3.2	3.2	74.2
	Minitab, Toad for Data Analyst, Excel, Word, Engage, ASI Datamyte, Atlas Copco tool programs.	1	3.2	3.2	77.4
	Minitab, Viseo, ProE, Excel, Lots of PowerPoint, Lotus Notes	1	3.2	3.2	80.6
	MS Office; Word, Powerpoint, Excel	1	3.2	3.2	83.9
	Protractor	1	3.2	3.2	87.1
	See my response to	1	3.2	3.2	90.3

	question #25.				
	SoildWorks, PRO-E, Outlook, Excel	1	3.2	3.2	93.5
	The only software I currently use is Cummins owned, I will start using Pro-E in the near future.	1	3.2	3.2	96.8
	Word, excel, powerpoint, microsoft outlook web email, and a tremendous amount of custom and corporate programs and software.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q30 Planning on attaining additional degrees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Another Associates	1	3.2	5.3	5.3
	Bachelor's	2	6.5	10.5	15.8
	Master's	16	51.6	84.2	100.0
	Total	19	61.3	100.0	
Missing	System	12	38.7		
Total		31	100.0		

q31 In what area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		30	96.8	96.8	96.8
	Engineering	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q32 Are you attending, or have you attended, any courses since graduating

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	25.8	25.8	25.8
	No	23	74.2	74.2	100.0
	Total	31	100.0	100.0	

q33 Source

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Another college/university	2	6.5	28.6	28.6
	Industry training	5	16.1	71.4	100.0
	Total	7	22.6	100.0	
Missing	System	24	77.4		
Total		31	100.0		

q33.a Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		25	80.6	80.6	80.6
	Company training, Microsoft Training, Correspondance Training	1	3.2	3.2	83.9
	Eaton RoadRanger Academy.	1	3.2	3.2	87.1
	Ferris State	1	3.2	3.2	90.3
	Great Lakes Maritime Academy- Deck Program, Lake Michigan College- Machine Tool Technology, Ferris- Business Administration	1	3.2	3.2	93.5
	Lancing Community College	1	3.2	3.2	96.8
	Quaility Training	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q34 Type

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		24	77.4	77.4	77.4
	Automotive and heavy Eqpt Mgmt	1	3.2	3.2	80.6
	Certification	1	3.2	3.2	83.9
	Different types of training programs focused on specific vehicle components.	1	3.2	3.2	87.1
	Eaton Automated, Mechanical, Datalink, and Serviceranger.	1	3.2	3.2	90.3
	General Studies for Mechanical Engineering	1	3.2	3.2	93.5
	See Above	1	3.2	3.2	96.8
	Truck Marketing Institute	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q35 How often

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		25	80.6	80.6	80.6
	4 - 5 classes per year.	1	3.2	3.2	83.9
	Didn't complete it. I was taking courses during the 2008 financial crash due because the job market fell off. However, I was able to land a position in 2009.	1	3.2	3.2	87.1
	once	1	3.2	3.2	90.3
	Once	1	3.2	3.2	93.5
	since leaving Ferris in 2006	1	3.2	3.2	96.8
	twice or three times a year.	1	3.2	3.2	100.0

	Total	31	100.0	100.0	

q36 Area of industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		24	77.4	77.4	77.4
	Aftermarket and Manufacture specific.	1	3.2	3.2	80.6
	Auto	1	3.2	3.2	83.9
	Heavy Equipmen t, Truckin, Diesel Technology	1	3.2	3.2	87.1
	Manufacturing, Maritime	1	3.2	3.2	90.3
	Mechanical Engineering	1	3.2	3.2	93.5
	Quality	1	3.2	3.2	96.8
	repair	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

q37 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		18	58.1	58.1	58.1
	add more design courses (autoCAD) and drop Pro/engineer - no one uses it! drop the useless electives, teach us something of value. i dont care if it may be of conversational benefit or cultural enrichment, i can pursue that on my own time. I paying for an education which will make me valuable to an employer. Even business courses are better then American Film History.	1	3.2	3.2	61.3
	Good program, our industry is struggling to find qualified people in all types of positions.	1	3.2	3.2	64.5
	I continually use the skills I acquired at FSU, a more in depth Diesel Heavy truck added into the Auto service program would allow for	1	3.2	3.2	67.7

	many more potential jobs. Although I don't plan to work as a technician I always have a serious set of skills to fall back on. I would recommend everyone starting the Auto Service program to finish the AET program! All of my classmates have excellent jobs and owe it all to FSU, I wish I would have stayed and finished the AET program!				
	I have attempted to continue my education for a Bachelor in Engineer but have been denied entrance into other University's. My GPA is NOT the issue. I have been told that the program I graduated from is far to weak in the areas of Math, Science, and Physics to be accepted into a major university. I have been told to attend a community college. I found this very frustrating as I have a 4 year bachelors degree in Science.	1	3.2	3.2	71.0
	I have referred lots of people to this program since it is so respected in the Industry. One piece of advice i woukd give to students are that the opportunities to work for a manufacturer are endless if they can commit to moving out of Michigan without the assistance of a relocation package.	1	3.2	3.2	74.2
	I sincerely believe the AET program has the resources,staff and potential to further develop itself into the program of choice for students who are sought after by the big three automakers, currently I don't believe that to be the case. After beginning my job and seeing a test lab on the inside I have said to myself many times "if they could just teach it that way in school it would have been so much more clear to me". The benchmarking approach to teaching Engineering Technology to me seems to touch on those skills best, just my opinion. Keep up the good work and say HI to Mr.	1	3.2	3.2	77.4

	Leonard for me.				
	No words can describe some of the staff in the automotive and AET department. My FSU experience was ruined by the AET program and in hindsight, I wish I could have attended another program. The only good that was brought out of this school was the Ferris Formula program (not hybrid). This extra-ciricular program (which Greg Key threatened to remove from the auto building) was the only thing that prepared me for my current position. Ferris AET must STOP preparing students to talk on a phone all day as a "service engineer" because it is a waste of the talented students who attend FSU.	1	3.2	3.2	80.6
	Overall I am satisfied with my degree at Ferris State. Without it, I know for sure I would not be where I am today.	1	3.2	3.2	83.9
	Overall, I believe the AET program as it stands is a strong degree for developing and launching young professionals into this tough-to-compete automotive market. It has done well for me and my career thus far. My small recommendations, if any, would be to incorporate more real world experience by way of additional internships, updated equipment for both service and engineering (i.e. scan tools, dyno), and adding an intro to business type course. Thank you.	1	3.2	3.2	87.1
	Please improve your AET program and become more active in placing students into internships. It is a shame that every AET grad I have talked to after graduating feels the same way I do about the AET program. It should not take over a year to find an internship. I was a good student, with a good GPA (3.65), and driven to work hard and learn. I think increasing the number of Math/Science classes required such as	1	3.2	3.2	90.3

	Calculus and Physics, as well as CAD/Catera classes is a step in the right direction. I would not choose this major again if I could do it over.				
	Push students to see what the job market is demanding from sophmore year, so that way they choose the right electives and be able to start a career right after they graduate. Force students to look for internships from Junior year and have them report the places they have applied.	1	3.2	3.2	93.5
	The AET program is a great program but could use some additional refinement.	1	3.2	3.2	96.8
	The AET program needs to keep up with the new technology in vehicles and the software that is being used in industry. Some of the professors that teach fuels and lubes are very bad teachers and are very unprofessional.	1	3.2	3.2	100.0
	Total	31	100.0	100.0	

4) Analysis

A) Job Placement

All of the Alumni of the AET/AUSV Program that returned the survey are employed in a related area. When asked if it was difficult to find employment upon graduation, all respondents indicated that it was not difficult to secure employment upon graduation from the AET Program, one stated that he had companies from five different states making employment offers to him.

B) Preparedness of the Graduate for the Marketplace

When asked to rate how pertinent the Auto Service Classes where to their employment, on a scale from one to five (five being the highest) the average response was a four. When asked to rate how pertinent the Auto Engineering Technology Classes where to their employment, on a scale from one to five (five being the highest) the average response was a four. When rating how pertinent the emphasis area the student took to their current assignment, also on a one to five scale, the average of the responses was four. Alumni where asked if they believe FSU and the

AET Program prepared them to successfully compete in the job market, all but two respondent indicated that they believed they had, one stated it was dependant upon the position. The respondent who indicated that the program did not prepare him to successfully compete in the job market is also the respondent not working in a related career area.

Section 2 – B. Employer Follow-Up Survey

This activity is intended to aid in assessing the employers' experiences with graduates and their perceptions of the program itself. A mailed or e-mailed instrument should be used to conduct the survey; however, if justified, telephone or personal interviews may suffice.

1) Technique

Paper survey circulated by mail with Business Response return envelope.

2) Effectiveness

3) Responses

4) Analysis

Section 2 – C. Graduating Student program evaluation

Section 2 – D. Student Program Evaluation

AET & AUSV APR...Current Students

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation

q1 Grade level	52	0	4.35	5.00	1.714
q2_1 Informed: Friend	51	1	.24	.00	.428
q2_2 Informed: Co-worker	51	1	.00	.00	.000
q2_3 Informed: High school counselor/teacher	51	1	.24	.00	.428
q2_4 Informed: FSU tour	51	1	.16	.00	.367
q2_5 Informed: Internet	51	1	.45	.00	.503
q2_6 Informed: Career Day	51	1	.00	.00	.000
q2_7 Informed: FSU student/graduate	51	1	.12	.00	.325
q2_8 Informed: Billboard or other advertisement	51	1	.00	.00	.000
q2_9 Informed: Other	51	1	.12	.00	.325
q2.a Other specified	52	0			
q3.a The overall quality of classroom instruction was excellent	52	0	3.00	3.00	.929
q3.b My instructors' demeanor was kind, courteous and helpful	52	0	3.12	3.00	.832
q3.c The instructors overall mastery of subject matter was appropriate	52	0	3.19	4.00	1.011
q3.d The instructors were regularly available for assistance	52	0	3.02	3.00	.918
q3.e The instructors exhibited professionalism in and out of class	51	1	3.25	4.00	.891
q4.a My advisor was knowledgeable about Gen Ed requirements	52	0	2.98	3.00	.980
q4.b My advisor was knowledgeable about Major/Technical related requirements	52	0	3.27	3.00	.770
q4.c My advisor kept me current with what I needed for graduation	52	0	2.92	3.00	.987
q4.d My advisor provided the information I needed to make decisions	52	0	2.88	3.00	1.022
q4.e My advisor was able to refer me to other sources of information	52	0	2.96	3.00	1.028
q5.a The quality of the material presented in classes was adequate	52	0	2.88	3.00	.963
q5.b The material was presented at an appropriate pace	52	0	2.96	3.00	.907
q5.c The instructional media utilized in class	52	0	2.87	3.00	.971

enhanced my learning					
q5.d The difficulty of the material was appropriate for the level of the course	52	0	2.96	3.00	.949
q5.e The Major and/or Technical Related courses were very relevant to my intended career	52	0	3.15	3.00	.777
q6.a The classroom conditions were conducive to learning	50	2	4.00	4.00	.782
q6.b The AET/AUSV program has adequate facilities and equipment	50	2	3.36	3.00	.964
q6.c The equipment and tools are kept operational and well maintained	49	3	3.24	3.00	1.031
q6.d The equipment is current with modern technology	49	3	3.18	3.00	.972
q6.e There was adequate availability of tools and equipment	50	2	3.58	4.00	.971
q7 Three strengths	52	0			
q8 Three improvements would recommend	52	0			
q9 Additional comments	52	0			

Frequency Table

q1 Grade level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Auto Service Technology Freshman	3	5.8	5.8	5.8
	AET Freshman	10	19.2	19.2	25.0
	Auto Service Technology Sophomore	1	1.9	1.9	26.9
	AET Sophomore	10	19.2	19.2	46.2
	AET Junior	8	15.4	15.4	61.5
	AET Senior	20	38.5	38.5	100.0
	Total	52	100.0	100.0	

q2_1 Informed: Friend

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	39	75.0	76.5	76.5
	Selected	12	23.1	23.5	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2_2 Informed: Co-worker

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	51	98.1	100.0	100.0
Missing	System	1	1.9		
Total		52	100.0		

q2_3 Informed: High school counselor/teacher

	Frequency	Percent	Valid Percent	Cumulative

					Percent
Valid	Not Selected	39	75.0	76.5	76.5
	Selected	12	23.1	23.5	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2_4 Informed: FSU tour

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	43	82.7	84.3	84.3
	Selected	8	15.4	15.7	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2_5 Informed: Internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	28	53.8	54.9	54.9
	Selected	23	44.2	45.1	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2_6 Informed: Career Day

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	51	98.1	100.0	100.0
Missing	System	1	1.9		
Total		52	100.0		

q2_7 Informed: FSU student/graduate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	45	86.5	88.2	88.2
	Selected	6	11.5	11.8	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2_8 Informed: Billboard or other advertisement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	51	98.1	100.0	100.0
Missing	System	1	1.9		
Total		52	100.0		

q2_9 Informed: Other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Selected	45	86.5	88.2	88.2
	Selected	6	11.5	11.8	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q2.a Other specified

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		41	78.8	78.8	78.8
	Career Cruising website	1	1.9	1.9	80.8
	Family	1	1.9	1.9	82.7
	Family Friend was a current student	1	1.9	1.9	84.6

	Friend of mine graduated from the Automotive Service Program in 2009.	1	1.9	1.9	86.5
	FSU Recruiter	1	1.9	1.9	88.5
	GRCC teacher that is a FSU AET alumni	1	1.9	1.9	90.4
	I'm was a former Universal Technical Institute student looking to get a degree, and Ferris was the only school that had a program that accepted UTI's credits.	1	1.9	1.9	92.3
	Representatives from Ferris State University visiting British Columbia Institute of Technology.	1	1.9	1.9	94.2
	Sam Santarre	1	1.9	1.9	96.2
	Uncle Graduated From Here in 1974	1	1.9	1.9	98.1
	Was looking for a automotive engineering degree.	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

q3.a The overall quality of classroom instruction was excellent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.7	7.7	7.7
	Somewhat Disagree	10	19.2	19.2	26.9
	Somewhat Agree	20	38.5	38.5	65.4
	Strongly Agree	18	34.6	34.6	100.0
	Total	52	100.0	100.0	

q3.b My instructors' demeanor was kind, courteous and helpful

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Somewhat Disagree	9	17.3	17.3	21.2
	Somewhat Agree	22	42.3	42.3	63.5
	Strongly Agree	19	36.5	36.5	100.0
	Total	52	100.0	100.0	

q3.c The instructors overall mastery of subject matter was appropriate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.7	7.7	7.7
	Somewhat Disagree	10	19.2	19.2	26.9
	Somewhat Agree	10	19.2	19.2	46.2
	Strongly Agree	28	53.8	53.8	100.0
	Total	52	100.0	100.0	

q3.d The instructors were regularly available for assistance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.7	7.7	7.7
	Somewhat Disagree	9	17.3	17.3	25.0
	Somewhat Agree	21	40.4	40.4	65.4
	Strongly Agree	18	34.6	34.6	100.0
	Total	52	100.0	100.0	

q3.e The instructors exhibited professionalism in and out of class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.9	3.9
	Somewhat Disagree	9	17.3	17.6	21.6
	Somewhat Agree	14	26.9	27.5	49.0
	Strongly Agree	26	50.0	51.0	100.0
	Total	51	98.1	100.0	
Missing	System	1	1.9		
Total		52	100.0		

q4.a My advisor was knowledgeable about Gen Ed requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	9.6	9.6	9.6
	Somewhat Disagree	10	19.2	19.2	28.8
	Somewhat Agree	18	34.6	34.6	63.5
	Strongly Agree	19	36.5	36.5	100.0
	Total	52	100.0	100.0	

q4.b My advisor was knowledgeable about Major/Technical related requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	1.9	1.9
	Somewhat Disagree	7	13.5	13.5	15.4
	Somewhat Agree	21	40.4	40.4	55.8
	Strongly Agree	23	44.2	44.2	100.0
	Total	52	100.0	100.0	

q4.c My advisor kept me current with what I needed for graduation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.7	7.7	7.7
	Somewhat Disagree	15	28.8	28.8	36.5
	Somewhat Agree	14	26.9	26.9	63.5
	Strongly Agree	19	36.5	36.5	100.0
	Total	52	100.0	100.0	

q4.d My advisor provided the information I needed to make decisions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.5	11.5	11.5
	Somewhat Disagree	12	23.1	23.1	34.6
	Somewhat Agree	16	30.8	30.8	65.4

	Strongly Agree	18	34.6	34.6	100.0
	Total	52	100.0	100.0	

q4.e My advisor was able to refer me to other sources of information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	13.5	13.5	13.5
	Somewhat Disagree	7	13.5	13.5	26.9
	Somewhat Agree	19	36.5	36.5	63.5
	Strongly Agree	19	36.5	36.5	100.0
	Total	52	100.0	100.0	

q5.a The quality of the material presented in classes was adequate

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	7.7	7.7	7.7
	Somewhat Disagree	15	28.8	28.8	36.5
	Somewhat Agree	16	30.8	30.8	67.3
	Strongly Agree	17	32.7	32.7	100.0
	Total	52	100.0	100.0	

q5.b The material was presented at an appropriate pace

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	9.6	9.6	9.6
	Somewhat Disagree	7	13.5	13.5	23.1
	Somewhat Agree	25	48.1	48.1	71.2
	Strongly Agree	15	28.8	28.8	100.0
	Total	52	100.0	100.0	

q5.c The instructional media utilized in class enhanced my learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.5	11.5	11.5
	Somewhat Disagree	10	19.2	19.2	30.8
	Somewhat Agree	21	40.4	40.4	71.2
	Strongly Agree	15	28.8	28.8	100.0
	Total	52	100.0	100.0	

q5.d The difficulty of the material was appropriate for the level of the course

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	11.5	11.5	11.5
	Somewhat Disagree	6	11.5	11.5	23.1
	Somewhat Agree	24	46.2	46.2	69.2
	Strongly Agree	16	30.8	30.8	100.0
	Total	52	100.0	100.0	

q5.e The Major and/or Technical Related courses were very relevant to my intended career

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	3.8	3.8	3.8
	Somewhat Disagree	6	11.5	11.5	15.4
	Somewhat Agree	26	50.0	50.0	65.4
	Strongly Agree	18	34.6	34.6	100.0
	Total	52	100.0	100.0	

q6.a The classroom conditions were conducive to learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	1.9	2.0	2.0
	Somewhat Disagree	12	23.1	24.0	26.0

	Somewhat Agree	23	44.2	46.0	72.0
	Strongly Agree	14	26.9	28.0	100.0
	Total	50	96.2	100.0	
Missing	NA	2	3.8		
Total		52	100.0		

q6.b The AET/AUSV program has adequate facilities and equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	21.2	22.0	22.0
	Somewhat Disagree	16	30.8	32.0	54.0
	Somewhat Agree	17	32.7	34.0	88.0
	Strongly Agree	6	11.5	12.0	100.0
	Total	50	96.2	100.0	
Missing	NA	2	3.8		
Total		52	100.0		

q6.c The equipment and tools are kept operational and well maintained

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	30.8	32.7	32.7
	Somewhat Disagree	10	19.2	20.4	53.1
	Somewhat Agree	18	34.6	36.7	89.8
	Strongly Agree	5	9.6	10.2	100.0
	Total	49	94.2	100.0	
Missing	NA	3	5.8		
Total		52	100.0		

q6.d The equipment is current with modern technology

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	15	28.8	30.6	30.6

	Somewhat Disagree	14	26.9	28.6	59.2
	Somewhat Agree	16	30.8	32.7	91.8
	Strongly Agree	4	7.7	8.2	100.0
	Total	49	94.2	100.0	
Missing	NA	3	5.8		
Total		52	100.0		

q6.e There was adequate availability of tools and equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	17.3	18.0	18.0
	Somewhat Disagree	11	21.2	22.0	40.0
	Somewhat Agree	22	42.3	44.0	84.0
	Strongly Agree	8	15.4	16.0	100.0
	Total	50	96.2	100.0	
Missing	NA	2	3.8		
Total		52	100.0		

q7 Three strengths

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		16	30.8	30.8	30.8
	- The non AUTO high level classes (PDET/MFGE/MATL) classes were excellent. I consider Mark Rusco and his teaching style the best I have ever experienced. Every day his classes included student interaction and real activities in which the students are involved in.	1	1.9	1.9	32.7
	-Instructors know what they are talking about -Students are tested on everything that must be learned for the ASE certifications and real world situations -Instructors will assign homework or practice sheets to be done so that the students get the material of the class	1	1.9	1.9	34.6

	1. The best part of the program is former secretary Kelly Hicks, she did everything for the program and kept it running. Whenever there was any issues all that had to be done was to go see Kelly, she was our class and internship advisor and should be in charge of the program. 2. The facility is very nice and could be used to have one of the best programs in the nation. The equipment and test vehicles are very nice, it just would be great to be allowed to use them to learn from instead of having them just sit around and collect dust. 3. The classes outside of the AET program were great and should continue to be used as support classes, especially the MFGE classes in my opinion.	1	1.9	1.9	36.5
	1. The education provided 2. Good Teachers 3. Good Facilities	1	1.9	1.9	38.5
	1) The dynamometer and Airflow classes 2) The hands on labs 3) The combining of both automotive and technical classes that prepares students for the working world.	1	1.9	1.9	40.4
	A couple of the workers there are amazing.	1	1.9	1.9	42.3
	All the Non-Automotive classes were very informative, very structured and relative to the engineering and designing in the automotive field. Most of the professors are very enthusiastic about what they teach. Most of them are friendly.	1	1.9	1.9	44.2
	Great professors and the cars are easy to work with and in good condition. The course materials are interesting and fun.	1	1.9	1.9	46.2
	hands on learning, the professionalism that professors have, the professors' helpfulness	1	1.9	1.9	48.1
	Hands on, small classes, and up to date equipment/facilities.	1	1.9	1.9	50.0
	I believe that the AET program has potential to great.	1	1.9	1.9	51.9
	I feel the professors are extremely	1	1.9	1.9	53.8

	knowledgable in the Automotive Industry. The Automotive Department has sufficent equipment to learn and work on vehicles of all makes. Also the creditability this program has is outstanding. When I mention I am enrolled at Ferris State for Automotive Engineering, people right away acknowledge what a good education I am receiving.				
	I like how the AET program combines engineering with hands on service.	1	1.9	1.9	55.8
	I think the teachers for MFGE,PDET,and MATL classes were all extremely knowledgeable, helpful, and ran the class very effectively. I feel like I learned the most in these classes. Mark Rusco, Bill Koepf, and Richard Goosen were three of my favorite teachers and they were the most helpful with my learning.	1	1.9	1.9	57.7
	Instructors know what they are teaching. Most instructors explain new topics clearly. I love the hands on lab experiences.	1	1.9	1.9	59.6
	Instuctors knowledge, hands on experience, Kelly hicks	1	1.9	1.9	61.5
	It offers a specialized degree. Gives access to engine/chassis dynos. Gives information on subjects not typically taught (airflow, dyno, alt fuels, fuels, emissions)	1	1.9	1.9	63.5
	Kelly Grant Hicks, The non-automotive based courses of the Curriculum The location of the college compared to others with "comparable," programs	1	1.9	1.9	65.4
	Knowledgable Instructors, most special tool are available,	1	1.9	1.9	67.3
	Mr. Wagner Course material The amount of space in labs and lifts	1	1.9	1.9	69.2
	Mr. Wagner, Mr. Billings, Mr. English, and Mr. Gage carry this program	1	1.9	1.9	71.2
	Really the only strengths are... 1. Inclusion of courses from other program 2. Interesting	1	1.9	1.9	73.1

	Courses- but they need to updated and administered by people who care about the students success and understanding 3. Some Faculty members- The faculty members that care about the program and their students are awesome! They provide me with hope that the program will be better someday. However, these faculty members don't stand up to the management of the program and ultimately the program has just stalled.				
	Service floor. Room's 110 and 105 are nice. Mr.Gage is a great instructor.	1	1.9	1.9	75.0
	Some equipment was new top of the line equipment.	1	1.9	1.9	76.9
	Teachers. Service Floor. Employers Brought in to the school.	1	1.9	1.9	78.8
	The ability to learn about all the specifics and go straight into that field	1	1.9	1.9	80.8
	The AET degree has the potential to be a very good competitive program The networking with outside companies and businesses is excellent There is a lot of hands-on experience	1	1.9	1.9	82.7
	The Basic Automotive topics are covered. Labs are informative. Teachers are very knowledgeable.	1	1.9	1.9	84.6
	the instructors are very knowledgable	1	1.9	1.9	86.5
	The only strength this program ever had was their secretary Kelly Hicks. Unfortunately due to workplace issues she transferred to a different program. Everything from classroom content all the way to the structure of the core AET classes (AUTO 310, 320, 450, 460,480, 493) needs a complete overhaul that can only be accomplished by staff replacement.	1	1.9	1.9	88.5
	The Staff, their knowledge of the subjects, and their enthusiasm.	1	1.9	1.9	90.4

	The teachers are willing to help, there is a lot of good material that is gone over, the teachers apply the material to real life	1	1.9	1.9	92.3
	There are not many programs like it at other schools Hands on experience coupled with deep understanding of material leads to being successful in industry. Great facility and tools etc, just wish we were able to actually use them.	1	1.9	1.9	94.2
	This program has no strengths since Kelly Hicks left.	1	1.9	1.9	96.2
	Up to date technology and a wonderful facility that lets us work hands on and get real world experience as best as possible.	1	1.9	1.9	98.1
	well the Dyno was a strength, but is now broken and I will never get to use it. Few of the professors are very very good and helpful. some of the courses are also very great.	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

q8 Three improvements would recommend

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		11	21.2	21.2	21.2
	- Any information about foreign cars - More engineer based learning - A few younger teachers with different input on current technologies	1	1.9	1.9	23.1
	- The 400 level AUTO classes are far too easy and do not go in depth to a high enough extent. The fuels and lubricants class was extremely lacking both in the classroom and the lab. The lab was scheduled to be 2-3 hours long and 3/4 of the time we were done within half an hour, let alone class was cancelled every few weeks. How Russ	1	1.9	1.9	25.0

	Leonard is qualified to teach a 400 level engineering class is beyond me as the fuels and lubricants class is the most lacking class in the program. Almost every 400 level AUTO class simply consisted of a power point every day with absolutely no student interaction, discussion, or activities. When asked questions, the 400 level AUTO professors often didn't know answers and would not go home and research an answer. The content covered in classrooms was often old technology and up to date. The 400 level AUTO classes need a HUGE overhaul to meet or exceed my expectations of the program. - The fact that this is an automotive engineering TEC HNOLOGY degree has and will continue to hold back graduates. Many recent graduates whom are well qualified for an engineering position at a major OEM are often turned down because they do not have en engineering degree. Ferris' college of engineering and technology needs to make a larger effort into getting this program out there, known, and accepted by more large companies. - Much of the equipment and tools in the automotive building are ancient. The chassis dynamometer has been down for a year now (even though it should have been fixed by now as from what I was told the insurance should have covered it). The building itself is ancient and is often about 85 degrees during summer/spring. How 85 degrees be a good learning environment? Had I known all of this before enrolling at ferris, I would have pursued my education elsewhere as the automotive engineering technology program here is extremely lacking, dwindling by a thread, and run by people whom don't seem to care about the students (Key, Leonard). Ferris seriously				

	needs to consider assessing/overhauling the program because without Kelly Hicks, it's going downhill.				
	-Need newer cars. Near completion of my freshman year and haven't touched anything new than a 2006 model. -shared AUSV/AET classes should have you be able to work on your own car if related to material. -More Mr. Wagner classes. What this guy knows and teaches only give us students that more of an advantage. He knows more than I feel i ever could. Is great to have someone who has worked in R&D for Chrysler.	1	1.9	1.9	26.9
	-Some lecutures need more hands-on demonstration to show students what the instructors are talking about -Student vehicles should be able to be brought in at the beginning of any lab that is offered -Instructors need to make sure that everything covered in lecture, must be covered in lab	1	1.9	1.9	28.8
	(1)Students shouldn't have to purchase huge course-packs if teachers are not going to cover all the material within it through the course of the semester. And if instructors do not cover all of that material, they should be obliged to post the notes that were not covered after finals. (2)Automotive department needs more equipment for all labs so instructors don't have to borrow equipment from other labs. (3) All vehicles should be used throughout any of the labs. I say this because there are many vehicles that are just sitting in the lots that don't even work. Plus, students work on all the same vehicles throughout the semester.	1	1.9	1.9	30.8
	1. The department head chair does not care about the student's well being as a whole in the program. He only thinks of himself, and highly. I feel like he does the minimum	1	1.9	1.9	32.7

	amount possible to make the AET program barely function. I believe the exact same thing applies to the AET program coordinator. 2. Most of the senior AET automotive professors are too lazy to update their classes and lectures. The emissions class takes a third of the semester to learn about what happened in the 1950s to 1970s. I know that the history is important, but it should be abbreviated. The class also doesn't really cover much about modern emissions and requirements, especially when it comes to diesel where the requirements have become huge issues. This is just one example of many that I could point out about the senior level automotive classes. 3.				
	1. Fire Greg Keys 2. Fire Russell Leonard 3. Bring back Kelly Hicks and put her in charge of the Automotive Program	1	1.9	1.9	34.6
	1. Most important: I know we all strive for knowledge; however, just because someone has knowledge of the subject, it doesn't mean they know how to teach! So, I would recommend getting the teachers that have been at that school for years to be let go. The teachers that have been there for many years don't seems to be open minded; they are set in there ways and aren't into hearing what the students have to say. It's tiring and I've only been there a year. 2. I have a year left and was upset to find out that the AET program isn't accepted as a true engineering degree. I might as well just be a technician with a 2 year degree. 3. For the type of program in that building, you would think that everything would be more updated.	1	1.9	1.9	36.5
	1. Need to update tools/machines to keep up with current century. The "New" alignment machine on the service floor is a joke and is	1	1.9	1.9	38.5

	junk. 2. The Automotive Performance Machining, Automatic Transmissions, and the HVAC courses should be added to the AET/AMGT Curriculum. 3. Allow the students to work on their own cars and do not charge them a markup. We students learn more about stuff when we work on our own cars because we drive them everyday. That is the most realistic experience for a student to have. THERE ARE PLENTY MORE "IMPROVEMENTS" THAT SHOULD BE PUT IN PLACE.				
	1. Newer Cars 2. Better Tools 3. Being able to bring in and work on our own cars	1	1.9	1.9	40.4
	1. The two gentlemen in charge of the program need to be removed and replaced. They are the most unfriendly and and unhelpful people I have ever encountered. If I would have known that these two guys were like this coming in I would have never went to school at Ferris. These two gentelmen in charge as well as the majority of the faculty has forgotten who is the customer. 2. The advisors are not doing there jobs, all of the students go to Kelly Hicks to get everything scheduled and get holds removed. I do not know how much extra instructors get payed to be internship advisors, but for my internship I never once was able to contact my advisor and had to do everything thru Kelly. I am very disappointed in this aspect of leadership, I know the company I did my internship for was also very disappointed in the program. 3. The AET classes use very old and repetitive information. Specifically AUTO 480, 460, and 450 are very similar content and just a waste of money for the program. I think the specifically teachers that need reviewed are McNulty, Leonard, and English. All courses need to be redone and	1	1.9	1.9	42.3

	new fresh content needs to be injected.				
	1.Update the program- Half the stuff we learn in class is from the mid 90's to like 2003. Those days are long gone! I understand that the automotive industry is advancing really fast but our program has been left in the past. 2.Management and some faculty of the program-The people in charge don't do anything to bring in new technology and advance the program. They just sit around and tell the students that they need to improve their grades to see results. As a student with good grades I can say that that statement is a lie! Also most faculty members are really nice people that care about our success but there are some that just read power point presentations and go home. As a professor at a university that is unacceptable. 3. Facilities and Equipment- The automotive center is a really old building with a lot of issues. It needs to be updated just like the program. In addition the building doesn't help the equipments longevity. Over the summer the expensive new Chas sis Dyno was ruined because of water damage. Another thing with equipment, is that it is all outdated or doesn't work. I know equipment is expensive but I pay a lot of money to come here and to have equipment that doesn't work makes me very angry. Where does my tuition go? Certainly not into my program I'll say that much.	1	1.9	1.9	44.2
	1) Adding a forced induction course 2) Updating some of the regularly used tools and equipment 3) Being more open to teach and talk about other manufactures other then the domestic manufactures	1	1.9	1.9	46.2
	A/C needs to be in all the classrooms. On service floor we should be able to work on	1	1.9	1.9	48.1

	our own cars since we work on instructor cars so often. The alignment rack on the service floor is in a terrible location and does not level properly, two major issues anytime when doin a 'quick' alignment.				
	As previously stated, the top improvement to this program is updating course information. AUTO 310/320 is taught as if computers are still non-existent. AUTO 450 has information that is not even relevant to the automotive field anymore. This is a major problem. The second improvement is the availability of modern equipment and techniques used in the industry. Industry professionals are willing to come in and give demonstrations, the effort just needs to be put forth to set this up. The third improvement would be to include some sort of capstone course to help bring all of our skills together in a senior project type of class. FormulaSAE is a great opportunity for this, and if a class was structured around designing a part on the vehicle it would help out the student and the program immensely.	1	1.9	1.9	50.0
	Better technology and updated equipment	1	1.9	1.9	51.9
	Bring Kelly back, she was the only one that knew what was going on. Work with transfer students so we do not have to stay 2.5-3 years because of scheduling conflicts. Fix Manual Trans and Electronic Diagnosis transfer equivalencies from Joliet Junior College. We were told all of our automotive classes would transfer and this is not the case. There are 7 students from JJC in the AET program and 3 in the Management program who transferred up this year. We have been told it's been "under review" for 7 months now. Please fix this.	1	1.9	1.9	53.8
	Demote, remove, or review the following	1	1.9	1.9	55.8

	individuals: Gregg Key, Russel Lenard,Mr. Mcnulty, and Patric English Combine the following classes / revise senior year: AUTO 450, 460, and 480 Make it a program entry based curriculum: (you must complete electives and pre-rec's, before automotive classes would be available)				
	Get the dyno machines fixed, there is no excuse for having them sit idle for months on end with no service or attention. Kids pay good money to come here and use the equipment, not have it sitting broken. This is a major issue that needs attention.	1	1.9	1.9	57.7
	If I could make changes to the AET program I would make engine machining, automatic transmissions, and HVAC required courses. Currently those courses are not required for the AET program but I feel they are extremely useful for AET students and knowledge gained from those courses is substantial. Also when I was on Serivce Floor I noticed that we do not do any engine work or transmission work. I think that is wrong. Service Floor is supposed to teach students how to be mechanics but if we cannot experience how to fix an engine or a transmission in a shop setting then we will not have that skill when we graduate.	1	1.9	1.9	59.6
	In order to be great, the AET would require professors who are knowledgeable and enthusiastic about modern automotive engineering. Half of the professors are either behind when it comes to current technology or simply are not enthusiastic about the subject(s) they teach. They show lack of leadership, interpersonal skills and most show a great lack of communication.	1	1.9	1.9	61.5
	Keep the equipment functioning. We have had the dyno installed here for 3 years and	1	1.9	1.9	63.5

	its been working for 1 our of 3 years. I got to use it 4 times and its been broken ever since. Have advisers only advise. My advising throughout my college career has been garbage. On a personal level, i like my adviser. As an adviser though, he is not the best. He never knows what I need to graduate, what classes to take, and always pawns me off on the secretary, who just recently left. She knew more about the entire program than my advisor. Make classes more stimulating. Having a teacher read blindly off of a power point is not conducive to learning. The teachers in the 400 level classes have less engaging lectures than my 100 level brakes class.				
	lab assistants, newer vehicles, less information about gm and more about other manufacturers	1	1.9	1.9	65.4
	Make classed such as Auto Trans, HVAC, and Engine Machining available without taking more than 8 semesters, such as directed electives instead of some of the enrichment and awareness classes.	1	1.9	1.9	67.3
	Management is terrible, getting rid of the best secretary was a horrible horrible move. Fix and actually use the dyno for what it was intended for, not loading and unloading a vehicle thats just stupid. re-evaluate some of the courses that are absolutely a waste of time because of the teacher or the way they are taught.	1	1.9	1.9	69.2
	More foreign cars (preferably European), more in-class homework, greater tool availability	1	1.9	1.9	71.2
	More modern cars for labs,	1	1.9	1.9	73.1
	more modern class requirements (in auto classes), less teaching of technology from the '90s and more from '12. time openly	1	1.9	1.9	75.0

	available for students to work on their own vehicles (self learning can be the best learning) Mr. Pete Alley was irreplaceable and should have stayed.				
	Newer cars. The newest one we work on would be an '06 which is already 6 years old. Newer equipment.	1	1.9	1.9	76.9
	Newer tools and better tool maintenance.	1	1.9	1.9	78.8
	Our program is terribly run. When I first got here I felt like I was lied too about what I would really get out of the program and what kind of jobs I would be prepared for. The most frustrating thing is that there seems to be almost no help given to the students to find internships. You're kind of just shoved out there and told to do it yourself. Certain teachers are very helpful but don't have any resources, but the ones in charge of the program don't do anything to help us with internships. Which is really disappointing since they are the ones who control the internship process. I think the AET program needs a complete re-evaluation because its headed downhill quick.	1	1.9	1.9	80.8
	Professors need to have more recent experience in the field. Some are great, but behind a bit on new tech. Having a class or some other way to make internship requirements straight forward and consistent. Also, having the head of the program open to different parts of the automotive engineering industry. Getting rid of overlapping material between classes, mostly in auto 450, 460, and 480. The labs were useless after the first 3 labs in two of the classes, and the last class really needs to have labs. Also, these 3 classes material overlaps so much it could easily be covered by 2 classes.	1	1.9	1.9	82.7
	Some AET instructors rely on power point	1	1.9	1.9	84.6

	slides to much. Using power point exclusively creates a disconnect in the learning environment. Also, some subjects information should be updated to keep pace with current technology (fuels, emissions). The strongest class in the program is Airflow/Dyno and Wagner is the most informed instructor. However, Wagner should focus more on engaging with the students and making the class more fun. Rather than focusing on ways to take points away and tricking students with his timed test. He should also give more information on newer engine technology that focus on emissions and fuel economy rather than big block engines focused on producing more HP. Fuels and emissions class offer alot of info but should not rely as much on power point and should try and incorporate more current information and equipment.				
	some of the equipment/tools need service and or replacement a more fair attitude of the "higher level" staff on fair treatment of his own "lower level" staff	1	1.9	1.9	86.5
	Some technology is not up to date and or what is actually used in the real world. My advisor was not much of a help i had to look up most of the technical problems myself or go to Kelly. Alot of the senior level courses should not of been 400 level and could of all been combined into one course.	1	1.9	1.9	88.5
	Student advising is extremely terrible. Promise of an structured articulation program between BCIT's automotive program and FSU's Automotive program presented by the representatives is practically non-existent (except for tuition rates). High pressure placed on transfer students to determine if transfer credits transfer or not- leaves us in	1	1.9	1.9	90.4

	the dark or credits transfer AFTER we have taken the course.				
	Talk about and do more hands on material that is more like real life situations (especially in labs), work on older cars as well as new cars for experience in both, have more tools available for labs	1	1.9	1.9	92.3
	The Auto building is in shambles, paint is falling off the walls, no AC in the classrooms, we have an old paint booth taking up valuable work space that is not being used. Only 3 of the classrooms are someone modernized, the rest have old wobbly tables and chairs. The old auto body lab is in desperate need of a remodel.	1	1.9	1.9	94.2
	the equipment needs major updating. we need new student vehicles. and the labs need major improvement as well as the tool crib.	1	1.9	1.9	96.2
	The only thing I disagree with, regarding the AET program, are all the cultural and social enrichment classes that are required. I understand that you're looking to produce a "well rounded" student, but it's also making it hard for me to fit the required classes into my schedule due to the awkward times that they're offered.	1	1.9	1.9	98.1
	We need more time in the lab through out the week, three hours is no where near enough of hands on.	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

q9 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		25	48.1	48.1	48.1
	At this point in time, would not recommend	1	1.9	1.9	50.0

	future students to transfer from BCIT to FSU.				
	For starters, whenever a student would go in and talk to the department head (Mr. Key) they would often be treated badly, disrespected, and have their views and expressions ignored. The AUTO professors also know nothing about advising. Kelly Hicks is the single reason why almost every student is able to graduate in time. She is the nicest, most kind hearted person in the automotive building and one of the only ones who knows every single student's name. Kelly Hicks was also the only knowledgable person when it came to scheduling and meeting requirements to graduate. My internship experience was also a nightmare (many other students would agree).	1	1.9	1.9	51.9
	gm doesn't produce every car made. it would be nice to learn about other technology once in a while	1	1.9	1.9	53.8
	I feel like this program has been a waste of my time and educational dollar and would have chosen a different path if (MET) if I would have known the end results.	1	1.9	1.9	55.8
	I have three final suggestions. 1) First add a C+ programming class. Most calibration engineer jobs (among others) want you to have some type of C+ programming experience. The programming should be incorporated into the airflow/dyno and emission labs. i.e. program this engines fuel and spark curves for max hp, program this engine for best emissions etc. 2) The math program "Matlab" should be incorporated into as many classes as possible. (thermodynamics, statistics, airflow/dyno, calculus) etc. Many employers want you know know at least the basics of how to use Matlab. 3) A couple times during the	1	1.9	1.9	57.7

	semester there should be an airflow/engine dyno refresher lab offered to all students. After taking the classes many students get "rusty" on how to use the equipment. This will keep students sharp when it comes time to interview for positions. I had a positive experience at Ferris. I feel there is room for improvement but the program is good overall. I would also consider a dding Calculus 2 and 3 to the curriculum and combine some of the hands on classes to make room. In order to compete for the best engineering jobs (not just "hotline" jobs)it will be necessary to make the program more similar to traditional EE and ME curriculum.				
	I hope that the forced induction course will be put into serious consideration. Every auto manufacture has at least one forced induction vehicle in the lineup. Forced induction has many misconceptions and if we, as students, do not get the chance to address them while we are learning in school then we might not have the knowledge needed to be picked for cretin positions.	1	1.9	1.9	59.6
	I love the program and the staff. I have enjoyed every minute being apart of this program and I am looking forward to the next two years I have left!	1	1.9	1.9	61.5
	I should be able to take the classes above with out having to spend extra time here, they will help me in the future but i cannot take them and fit them in to my schedule due to other classes that are "necessary" Service floor should not charge markup on student worker cars if the repair is legitimize. i am paying to take the class and am also making the school money from customer cars i should not be paying a third time to make the school more money.	1	1.9	1.9	63.5

	I think there should be an autobody or painting/refinishing program at Ferris. Especially since there is a spray booth in one of the labs that is being used for storage. I also feel that there should be a class and/or more information on diesel engines.	1	1.9	1.9	65.4
	I thoroughly enjoyed having Mr. Alger as my instructor, as he greatly enhanced the learning environment and my enthusiasm for learning. His knowledge of not only what he was teaching, but also many other class subjects was very thorough. It was an atrocity to see him leave.	1	1.9	1.9	67.3
	I wish we had more opportunities to bring in and work on our own cars/projects, such as engine overhaul. transmission overhaul, or ring & pinion gear rebuild	1	1.9	1.9	69.2
	I would really appreciate it if the teachers did not "read" their powerpoints instead of just using them in their lectures; I find it to be distracting.	1	1.9	1.9	71.2
	Kelly hicks has been the most helpful person in the automotive department. She knows how the department works and where to direct me if she isn't able to help.	1	1.9	1.9	73.1
	Kelly Hicks was the only faculty in the auto building that fully understood all the classes we needed, what and how to transfer credits as well as how to go about the internship process. She was amazingly helpful when academic advisers fell short, which they often have.	1	1.9	1.9	75.0
	Most of us seniors are worried that the AET programs will no longer be there in a few years to come. This means that our degrees will eventually become pointless. Several students have tried to press the issue of seriously evaluating the AET program, but we're simply too small or unimportant for the	1	1.9	1.9	76.9

	college to hear us. Most of us are going to graduate. It is sad that many of us view the Ferris AET program as a bad decision.				
	Mr. Leonard's "Buddies" cars should not be allowed to be worked on on the service floor with him only as a contact. The "new"alignment machine doesnt lift the vehicle straight and you spend more time messin with it than actually working on the car. The service floor is a joke. I am required to take a course where have to pay to work on someone elses car which makes the school money because they charge the customers a huge markup, and then they charge me a markup to work on my own vehicles. The equipment in the Engine Performance Machining Lab is out of date such as the Bore Honer Sunnen CK-10, the cleaning equipment, as well as the Crankshaft Grinders. The scan tools should be more current meaning not just Snapon bullcrap I mean manufacturer specific. Paying for a dyno class that has no dnyos that actually work is bullcrap. The automotive building should have more student jobs. I wouldnt mind giving prospective students a tour of our facility. Each instructor should have an assistant in each lab period. The instructors are always swamped and students fall behind all the time in labs. I have plenty more suggestions/comments but this box is not big enough. Good Day.	1	1.9	1.9	78.8
	Now that a certain someone has left the front office in AET. I feel lost and am not sure who to go to or who to trust with my schedule or any other questions. It's too bad everything turned out the way it did.	1	1.9	1.9	80.8
	Our scan tools are out of date. Mr. English is not a 100 level teacher.	1	1.9	1.9	82.7

	Overall, my experience in the Automotive Service Program at Ferris has been a neat experience and hope it continues my next year. I've learned quite a bit so far. However, I just think that some of the equipment may need upgrades and that opportunities to get in certain classes should not be a problem when it comes to registration. Also, I think that if the instructors are going to assign book work to students, they should at least show us everything that was covered in each chapter in lab because there are some things such as techniques, or diagnosis that I would read in the chapters that we never covered in lab. That's about it, thank you for reading.	1	1.9	1.9	84.6
	Overall, this auto program has really gone downhill since I have started here. Classes keep getting worse and worse, advising is a joke, and nobody seems to know anything about the program when you need a question answered, so they shuffle you on to the secretary. Fix the dyno, its been over a year since I have seen it running. My tuition keeps going up and my education quality continues to go down.	1	1.9	1.9	86.5
	Please heed these comments from myself and my fellow students because change NEEDS to happen, and it has needed to happen for the past few years from what I can see. Thank you for your time.	1	1.9	1.9	88.5
	PLEASE HELP OUR PROGRAM! GET NEW MANAGEMENT! THE PEOPLE IN CHARGE ARE JOKERS FOOLING THE UNIVERSITY, TAKING MONEY, AND NOT GIVING STUDENTS THE EDUCATION WE CAME HERE FOR!	1	1.9	1.9	90.4
	Thanks!	1	1.9	1.9	92.3
	The Forth year classes, and teacher were an	1	1.9	1.9	94.2

	ultimate a disappointment. Most of their behavior was unprofessional.				
	The internships are complete ********. Paying thousands of dollars for the course, paying to relocate to your job for the summer, and working for free in some cases is ridiculous. Internships should be free!!!	1	1.9	1.9	96.2
	This program has the potential to be the best automotive program in the nation. I am very disappointed in the program and would definetley not go through this program again and I'm going to tell everyone I know to not go to this program. Kelly Hicks was the best part of the program and we just lost her, she should be put in charge and you would see the best auto program in the nation.	1	1.9	1.9	98.1
	Whenever I need to ask a question in the Automotive office, I am directed to ask either Mr. Keys or Mr. Leonard. If I ask Mr. Keys, he tells me he doesn't know and to go ask Mr. Leonard, who then tells he doesn't know and to go ask Mr. Keys. We need people in this department who actually get things done. I now no longer have any confidence in the Automotive Department, nor any of the programs now that Kelly Hicks no longer works in the Automotive Department. The wrong person was removed from their job in this department, I like many other students I talk to feel the exact same way. Also, we need teachers who have the proper knowledge of other automotive manufacturers. Every class I have revolves around the Chevy 350. When a question is asked about some new foreign vehicle, the teachers have no knowledge on the subject.	1	1.9	1.9	100.0
	Total	52	100.0	100.0	

AET/AUSV APR...Faculty

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation
q1.a Participation in Development of College Occupational Education Program Plan	4	1	4.50	4.50	.577
q1.b Program Goals	5	0	4.40	5.00	.894
q1.c Course Objectives	5	0	4.60	5.00	.548
q1.d Competency Based Performance Objectives	5	0	4.80	5.00	.447
q1.e Use of Competency Based Performance Objectives	5	0	4.80	5.00	.447
q1.f Use of Information on Labor Market Needs	5	0	4.20	5.00	1.304
q1.g Use of Information on Job Performance Requirements	5	0	4.40	5.00	1.342
q1.h Use of Professional/Industry Standards	5	0	5.00	5.00	.000
q1.i Use of Student Follow-Up Information	5	0	3.80	5.00	1.789
q2.a Adaptation of Instruction	5	0	4.20	5.00	1.304
q2.b Relevance of Supportive Courses	5	0	4.60	5.00	.548
q2.c Coordination with Other Community Agencies and Educational Programs	5	0	3.80	4.00	1.304
q2.d Provision for Work Experience, Cooperative Education or Clinical Experience	5	0	4.80	5.00	.447
q2.e Program Availability and Accessibility	5	0	4.80	5.00	.447
q2.f Provision for the Disadvantaged	4	1	4.50	5.00	1.000
q2.g Provision for the Handicapped	5	0	4.00	5.00	1.414

q2.h Efforts to Achieve Sex Equity	5	0	4.00	5.00	1.414
q2.i Provision for Program Advisement	5	0	4.00	5.00	1.414
q2.j Provision for Career Planning and Guidance	5	0	4.40	5.00	.894
q2.k Adequacy of Career Planning and Guidance	5	0	4.20	5.00	1.095
q2.l Provision for Employability Information	5	0	4.20	5.00	1.095
q2.m Placement Effectiveness for Students in this Program	5	0	4.60	5.00	.548
q2.n Student Follow-up System	5	0	3.80	4.00	1.643
q2.o Promotion of this Occupational Program	4	1	4.00	4.00	1.155
q3.a Provision for Leadership and Coordination	5	0	3.40	3.00	1.517
q3.b Qualifications of Administrators and/or Supervisors	5	0	2.80	2.00	2.049
q3.c Instructional Staffing	5	0	4.80	5.00	.447
q3.d Qualifications of Instructional Staff	5	0	4.80	5.00	.447
q3.e Professional Development Opportunities	5	0	4.60	5.00	.894
q3.f Use of Instructional Support Staff	5	0	4.20	4.00	.837
q3.g Use of Clerical Support Staff	5	0	3.40	3.00	1.673
q3.h Adequacy and Availability of Instructional Equipment	5	0	3.20	3.00	1.095
q3.i Maintenance and Safety of Instructional Equipment	5	0	3.80	4.00	1.304
q3.j Adequacy of Instructional Facilities	5	0	3.00	2.00	1.414
q3.k Scheduling of Instructional Facilities	5	0	3.40	3.00	1.517
q3.l Adequacy and Availability of Materials and Supplies	5	0	3.40	3.00	1.140
q3.m Adequacy and Availability of Learning Resources	5	0	3.80	5.00	1.643
q3.n Use of Advisory Committees	5	0	2.60	1.00	2.191
q3.o Adequacy of Current Operating Budget	5	0	2.80	2.00	1.643
q3.p Budget Provisions in Capital Outlay Budget for Equipment	5	0	2.20	2.00	1.643
q4.a Current, state of the industry, equipment is used in instruction	5	0	2.80	3.00	.837

q4.b Adequate funds are in place for replacement of outdated equipment	5	0	2.00	2.00	1.225
q4.c A dedicated classroom would benefit the AET Program and increase its visibility	5	0	3.00	3.00	.707
q4.d The potential for program growth would increase with an increase in resources	5	0	3.40	4.00	.894
q4.e The program resources are adequate to compete with similar programs at other schools	5	0	2.00	2.00	1.225
q5 Strengths of program	5	0			
q6 Areas that need improvement	5	0			
q7 Recommended changes	5	0			
q8 Additional comments	5	0			

Frequency Table

q1.a Participation in Development of College Occupational Education Program Plan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	50.0	50.0
	Excellent	2	40.0	50.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q1.b Program Goals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.c Course Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.d Competency Based Performance Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0

	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.e Use of Competency Based Performance Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.f Use of Information on Labor Market Needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.g Use of Information on Job Performance Requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.h Use of Professional/Industry Standards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	5	100.0	100.0	100.0

q1.i Use of Student Follow-Up Information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.a Adaptation of Instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.b Relevance of Supportive Courses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.c Coordination with Other Community Agencies and Educational Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Good	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q2.d Provision for Work Experience, Cooperative Education or Clinical Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q2.e Program Availability and Accessibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q2.f Provision for the Disadvantaged

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	25.0	25.0
	Excellent	3	60.0	75.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q2.g Provision for the Handicapped

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.h Efforts to Achieve Sex Equity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.i Provision for Program Advisement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.j Provision for Career Planning and Guidance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.k Adequacy of Career Planning and Guidance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.l Provision for Employability Information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.m Placement Effectiveness for Students in this Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.n Student Follow-up System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Good	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q2.o Promotion of this Occupational Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	50.0	50.0
	Excellent	2	40.0	50.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q3.a Provision for Leadership and Coordination

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Acceptable	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.b Qualifications of Administrators and/or Supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	2	40.0	40.0	40.0
	Below Expectations	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.c Instructional Staffing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.d Qualifications of Instructional Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.e Professional Development Opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.f Use of Instructional Support Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.g Use of Clerical Support Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Acceptable	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.h Adequacy and Availability of Instructional Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	3	60.0	60.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.i Maintenance and Safety of Instructional Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Good	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.j Adequacy of Instructional Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	3	60.0	60.0	60.0
	Good	1	20.0	20.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.k Scheduling of Instructional Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Acceptable	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.l Adequacy and Availability of Materials and Supplies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	2	40.0	40.0	60.0
	Good	1	20.0	20.0	80.0

	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.m Adequacy and Availability of Learning Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q3.n Use of Advisory Committees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	3	60.0	60.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.o Adequacy of Current Operating Budget

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Below Expectations	2	40.0	40.0	60.0
	Good	1	20.0	20.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.p Budget Provisions in Capital Outlay Budget for Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	2	40.0	40.0	40.0
	Below Expectations	2	40.0	40.0	80.0

	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.a Current, state of the industry, equipment is used in instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	2	40.0	40.0	40.0
	Somewhat Agree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.b Adequate funds are in place for replacement of outdated equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	40.0	40.0	40.0
	Somewhat Disagree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.c A dedicated classroom would benefit the AET Program and increase its visibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	20.0	20.0	20.0
	Somewhat Agree	3	60.0	60.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.d The potential for program growth would increase with an increase in resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	20.0	20.0	20.0

	Somewhat Agree	1	20.0	20.0	40.0
	Strongly Agree	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q4.e The program resources are adequate to compete with similar programs at other schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	40.0	40.0	40.0
	Somewhat Disagree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q5 Strengths of program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AET: strong program, excellent career opportunities	1	20.0	20.0	20.0
	Faculty dedication to the program and students	1	20.0	20.0	40.0
	Service area, hands-on classes	1	20.0	20.0	60.0
	The dedication of the faculty is the number one strength.	1	20.0	20.0	80.0
	The Faculty years of experience and knowledge in the subject matter	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q6 Areas that need improvement

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	aggressive recruiting is needed	1	20.0	20.0	20.0
	An increase in finacial support and leadership in the growth of the programs	1	20.0	20.0	40.0
	Require ASE certification from transfer students	1	20.0	20.0	60.0
	The lack of monetary support for improved facilities and equipment	1	20.0	20.0	80.0
	We lack leadership at the director and coordinator levels. We need to take our advisory committees seriously and work with them to adjust our programming appropriately instead of holding our breath until they leave and everything returns to the status quo. We need to create an environment where students, faculty and staff are excited and enthusiastic about learning, teaching and working.	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q7 Recommended changes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	40.0	40.0	40.0
	I think we need new leadership with fresh ideas that will solicit recommendations from industry and work to	1	20.0	20.0	60.0

	improve relationships. We need administration that recognizes the strengths of each faculty and works to capitolize on those strengths in order to build a stronger faculty unit.				
	Increased finacial support to update dated equipment and classroom materials used in lab areas like scan tools and electronic diagnosses equipment etc.	1	20.0	20.0	80.0
	remove one MFGE class and replace with a calibration/communication protocol course	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q8 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	80.0	80.0	80.0
	I am very disappointed in the amount of time and resources that the director has spent to create a work environment so unpleasant that faculty and staff find it better to leave than to stay. I think that time and energy could be better spent fostering new industry partners and reinforcing relationships with current ones.	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

Section 2 – E. Faculty Perceptions

AET/AUSV APR...Faculty

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation
q1.a Participation in Development of College Occupational Education Program Plan	4	1	4.50	4.50	.577
q1.b Program Goals	5	0	4.40	5.00	.894
q1.c Course Objectives	5	0	4.60	5.00	.548
q1.d Competency Based Performance Objectives	5	0	4.80	5.00	.447
q1.e Use of Competency Based Performance Objectives	5	0	4.80	5.00	.447
q1.f Use of Information on Labor Market Needs	5	0	4.20	5.00	1.304
q1.g Use of Information on Job Performance Requirements	5	0	4.40	5.00	1.342
q1.h Use of Professional/Industry Standards	5	0	5.00	5.00	.000
q1.i Use of Student Follow-Up Information	5	0	3.80	5.00	1.789
q2.a Adaptation of Instruction	5	0	4.20	5.00	1.304
q2.b Relevance of Supportive Courses	5	0	4.60	5.00	.548
q2.c Coordination with Other Community Agencies and Educational Programs	5	0	3.80	4.00	1.304
q2.d Provision for Work Experience, Cooperative Education or Clinical Experience	5	0	4.80	5.00	.447
q2.e Program Availability and Accessibility	5	0	4.80	5.00	.447
q2.f Provision for the Disadvantaged	4	1	4.50	5.00	1.000

q2.g Provision for the Handicapped	5	0	4.00	5.00	1.414
q2.h Efforts to Achieve Sex Equity	5	0	4.00	5.00	1.414
q2.i Provision for Program Advisement	5	0	4.00	5.00	1.414
q2.j Provision for Career Planning and Guidance	5	0	4.40	5.00	.894
q2.k Adequacy of Career Planning and Guidance	5	0	4.20	5.00	1.095
q2.l Provision for Employability Information	5	0	4.20	5.00	1.095
q2.m Placement Effectiveness for Students in this Program	5	0	4.60	5.00	.548
q2.n Student Follow-up System	5	0	3.80	4.00	1.643
q2.o Promotion of this Occupational Program	4	1	4.00	4.00	1.155
q3.a Provision for Leadership and Coordination	5	0	3.40	3.00	1.517
q3.b Qualifications of Administrators and/or Supervisors	5	0	2.80	2.00	2.049
q3.c Instructional Staffing	5	0	4.80	5.00	.447
q3.d Qualifications of Instructional Staff	5	0	4.80	5.00	.447
q3.e Professional Development Opportunities	5	0	4.60	5.00	.894
q3.f Use of Instructional Support Staff	5	0	4.20	4.00	.837
q3.g Use of Clerical Support Staff	5	0	3.40	3.00	1.673
q3.h Adequacy and Availability of Instructional Equipment	5	0	3.20	3.00	1.095
q3.i Maintenance and Safety of Instructional Equipment	5	0	3.80	4.00	1.304
q3.j Adequacy of Instructional Facilities	5	0	3.00	2.00	1.414
q3.k Scheduling of Instructional Facilities	5	0	3.40	3.00	1.517
q3.l Adequacy and Availability of Materials and Supplies	5	0	3.40	3.00	1.140
q3.m Adequacy and Availability of Learning Resources	5	0	3.80	5.00	1.643
q3.n Use of Advisory Committees	5	0	2.60	1.00	2.191
q3.o Adequacy of Current Operating Budget	5	0	2.80	2.00	1.643
q3.p Budget Provisions in Capital Outlay Budget for Equipment	5	0	2.20	2.00	1.643
q4.a Current, state of the industry,	5	0	2.80	3.00	.837

equipment is used in instruction					
q4.b Adequate funds are in place for replacement of outdated equipment	5	0	2.00	2.00	1.225
q4.c A dedicated classroom would benefit the AET Program and increase its visibility	5	0	3.00	3.00	.707
q4.d The potential for program growth would increase with an increase in resources	5	0	3.40	4.00	.894
q4.e The program resources are adequate to compete with similar programs at other schools	5	0	2.00	2.00	1.225
q5 Strengths of program	5	0			
q6 Areas that need improvement	5	0			
q7 Recommended changes	5	0			
q8 Additional comments	5	0			

Frequency Table

q1.a Participation in Development of College Occupational Education Program Plan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	50.0	50.0
	Excellent	2	40.0	50.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q1.b Program Goals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.c Course Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.d Competency Based Performance Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0

	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.e Use of Competency Based Performance Objectives

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.f Use of Information on Labor Market Needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q1.g Use of Information on Job Performance Requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q1.h Use of Professional/Industry Standards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	5	100.0	100.0	100.0

q1.i Use of Student Follow-Up Information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.a Adaptation of Instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.b Relevance of Supportive Courses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.c Coordination with Other Community Agencies and Educational Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Good	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q2.d Provision for Work Experience, Cooperative Education or Clinical Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q2.e Program Availability and Accessibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q2.f Provision for the Disadvantaged

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	25.0	25.0
	Excellent	3	60.0	75.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q2.g Provision for the Handicapped

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.h Efforts to Achieve Sex Equity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.i Provision for Program Advisement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.j Provision for Career Planning and Guidance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	1	20.0	20.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.k Adequacy of Career Planning and Guidance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.l Provision for Employability Information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.m Placement Effectiveness for Students in this Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q2.n Student Follow-up System

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Good	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q2.o Promotion of this Occupational Program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	2	40.0	50.0	50.0
	Excellent	2	40.0	50.0	100.0
	Total	4	80.0	100.0	
Missing	Don't Know	1	20.0		
Total		5	100.0		

q3.a Provision for Leadership and Coordination

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Acceptable	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.b Qualifications of Administrators and/or Supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	2	40.0	40.0	40.0
	Below Expectations	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.c Instructional Staffing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.d Qualifications of Instructional Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.e Professional Development Opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Excellent	4	80.0	80.0	100.0
	Total	5	100.0	100.0	

q3.f Use of Instructional Support Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Acceptable	1	20.0	20.0	20.0
	Good	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.g Use of Clerical Support Staff

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Acceptable	2	40.0	40.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.h Adequacy and Availability of Instructional Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	3	60.0	60.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.i Maintenance and Safety of Instructional Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	1	20.0	20.0	40.0
	Good	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.j Adequacy of Instructional Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	3	60.0	60.0	60.0
	Good	1	20.0	20.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.k Scheduling of Instructional Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Acceptable	1	20.0	20.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.l Adequacy and Availability of Materials and Supplies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	1	20.0	20.0	20.0
	Acceptable	2	40.0	40.0	60.0
	Good	1	20.0	20.0	80.0

	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.m Adequacy and Availability of Learning Resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below Expectations	2	40.0	40.0	40.0
	Excellent	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q3.n Use of Advisory Committees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	3	60.0	60.0	60.0
	Excellent	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

q3.o Adequacy of Current Operating Budget

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	1	20.0	20.0	20.0
	Below Expectations	2	40.0	40.0	60.0
	Good	1	20.0	20.0	80.0
	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q3.p Budget Provisions in Capital Outlay Budget for Equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	2	40.0	40.0	40.0
	Below Expectations	2	40.0	40.0	80.0

	Excellent	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.a Current, state of the industry, equipment is used in instruction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	2	40.0	40.0	40.0
	Somewhat Agree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.b Adequate funds are in place for replacement of outdated equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	40.0	40.0	40.0
	Somewhat Disagree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.c A dedicated classroom would benefit the AET Program and increase its visibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	20.0	20.0	20.0
	Somewhat Agree	3	60.0	60.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q4.d The potential for program growth would increase with an increase in resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	20.0	20.0	20.0

	Somewhat Agree	1	20.0	20.0	40.0
	Strongly Agree	3	60.0	60.0	100.0
	Total	5	100.0	100.0	

q4.e The program resources are adequate to compete with similar programs at other schools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	40.0	40.0	40.0
	Somewhat Disagree	2	40.0	40.0	80.0
	Strongly Agree	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q5 Strengths of program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AET: strong program, excellent career opportunities	1	20.0	20.0	20.0
	Faculty dedication to the program and students	1	20.0	20.0	40.0
	Service area, hands-on classes	1	20.0	20.0	60.0
	The dedication of the faculty is the number one strength.	1	20.0	20.0	80.0
	The Faculty years of experience and knowledge in the subject matter	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q6 Areas that need improvement

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	aggressive recruiting is needed	1	20.0	20.0	20.0
	An increase in finacial support and leadership in the growth of the programs	1	20.0	20.0	40.0
	Require ASE certification from transfer students	1	20.0	20.0	60.0
	The lack of monetary support for improved facilities and equipment	1	20.0	20.0	80.0
	We lack leadership at the director and coordinator levels. We need to take our advisory committees seriously and work with them to adjust our programming appropriately instead of holding our breath until they leave and everything returns to the status quo. We need to create an environment where students, faculty and staff are excited and enthusiastic about learning, teaching and working.	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q7 Recommended changes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	40.0	40.0	40.0
	I think we need new leadership with fresh ideas that will solicit recommendations from industry and work to	1	20.0	20.0	60.0

	improve relationships. We need administration that recognizes the strengths of each faculty and works to capitolize on those strengths in order to build a stronger faculty unit.				
	Increased finacial support to update dated equipment and classroom materials used in lab areas like scan tools and electronic diagnosses equipment etc.	1	20.0	20.0	80.0
	remove one MFGE class and replace with a calibration/communication protocol course	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

q8 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		4	80.0	80.0	80.0
	I am very disappointed in the amount of time and resources that the director has spent to create a work environment so unpleasant that faculty and staff find it better to leave than to stay. I think that time and energy could be better spent fostering new industry partners and reinforcing relationships with current ones.	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

Section 2 – F. Advisory Committee Perceptions

AET/AUSV APR...AET Advisory Board

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation
q1.a The curriculum reflects the knowledge and skill sets required for entry level engineering technology positions	12	0	4.50	4.50	.522
q1.b The courses are current and relevant	12	0	4.08	4.00	.515
q1.c The curriculum is concentrated in appropriate subjects	12	0	4.00	4.00	.603
q1.d The curriculum is routinely reviewed and revised when needed	12	0	4.42	4.00	.515
q1.e Advisory committee input is an integral component of curriculum development	12	0	4.67	5.00	.492
q1.f The curriculum allows the student to select specialization	11	1	3.82	4.00	.874
q1.g The emphasis areas are indicative of industry trends and needs	12	0	3.67	4.00	.778
q1.h The Auto Service Technology curriculum is a crucial component of the AET curriculum	12	0	3.67	3.50	1.155
q1.i AET graduates are well prepared for industry employment	12	0	4.50	5.00	.674
q1.j The Service Floor is a valuable component of the AET curriculum	12	0	4.08	4.00	.996

q1.k The AET program should continue ABET accreditation	12	0	4.50	5.00	.798
q1.l The curriculum should expand into additional areas	12	0	4.08	4.50	.996
q2 Feel curr should expand, identify areas here	12	0			
q3 Comments on curriculum	12	0			
q4.a The program outcomes are aligned with preparing the student for entry level engineering technology positions	11	1	4.27	4.00	.467
q4.b The program outcomes are current and relevant to the industry	11	1	4.27	4.00	.647
q4.c The outcomes are routinely reviewed and revised when needed	11	1	4.27	4.00	.647
q4.d The outcomes insure the comprehensive development of the student: knowledge, abilities, work ethic, and communication skills	11	1	4.00	4.00	.632
q4.e The program outcomes encourage students to excel	10	2	4.20	4.00	.632
q4.f ASE certification is required for employment	11	1	2.82	3.00	1.250
q4.g ASE certification should be required for graduation	11	1	3.09	3.00	1.300
q5 ASE certification areas most important on job	12	0			
q6 ASE certification areas least important on job	12	0			
q7 Comments on outcomes	12	0			
q8.a The facilities are well organized	11	1	4.00	4.00	.447
q8.b The facilities are well utilized	10	2	3.60	4.00	.843
q8.c The facility reflects the quality of the program	11	1	3.27	3.00	.786
q8.d The AET program should have designated classrooms and labs	11	1	4.45	5.00	.688
q8.e Lab facilities are conducive to studies required by the AET curriculum	11	1	3.82	4.00	.751
q8.f Additional lab space is needed	11	1	4.00	4.00	.775
q8.g Enhancement of the facility would	11	1	4.45	5.00	.820

benefit enrollment					
q9 Comments on facilities	12	0			
q10.a Equipment is modern and reflects industry standards	11	1	3.45	4.00	.820
q10.b The equipment is adequate for instructional purposes	11	1	3.82	4.00	.603
q10.c Additional equipment is needed for specific classes	11	1	3.91	4.00	.831
q10.d Greatly benefit from the acquisition of additional equipment	11	1	4.36	5.00	.924
q11 Identify specific classes need additional equipment	12	0			
q12 What equipment acquisitions would benefit program	12	0			
q13 Comments on equipment	12	0			
q14.a The Advisory Committee performs a valuable function	11	1	4.82	5.00	.405
q14.b Input provided by the Advisory Committee is promptly acted upon	11	1	3.55	4.00	.820
q14.c The Advisory Committee should meet more often	11	1	2.91	3.00	.701
q14.d More members are needed on the committee	10	2	3.30	3.00	.675
q14.e The department's report to the committee is comprehensive	11	1	3.45	3.00	.522
q14.f The department's report to the committee is informative	11	1	3.55	4.00	.522
q15 Feel committee should meet more often, how often	12	0			
q16.a Technical knowledge	11	1	4.09	4.00	.539
q16.b Mechanical skill level	11	1	4.27	4.00	.467
q16.c Task organizational practices	11	1	3.64	4.00	1.027
q16.d Application of efficient work habits	11	1	3.45	4.00	.934
q16.e Ability to learn new procedures	11	1	4.00	4.00	.447
q16.f Cooperation with co-workers	10	2	3.90	4.00	.568
q16.g Relationships with co-workers	11	1	4.00	4.00	.632
q16.h Cooperation with supervisors	11	1	3.91	4.00	1.136
q16.i Relationships with supervisors	11	1	3.73	4.00	1.009

q16.j Demonstrates effective leadership qualities	11	1	3.55	4.00	.522
q16.k Level of confidence to complete tasks	11	1	3.82	4.00	.405
q16.l Ability to diagnose unanticipated problems	11	1	3.55	4.00	1.036
q16.m Interest in developing technical knowledge	11	1	4.27	4.00	.647
q16.n Verbal communication skill level	11	1	3.73	4.00	.647
q16.o Written communication skill level	11	1	3.55	4.00	1.036
q16.p Ability to interact with customers	11	1	3.36	4.00	1.286
q16.q Exercises safe work practices	11	1	3.73	4.00	1.104
q16.r Appearance and neatness	10	2	3.70	4.00	.483
q16.s Demonstrates ethical work practices	10	2	3.50	4.00	.972
q17 Recommendations	12	0			
q18 Additional comments	12	0			

Frequency Table

q1.a The curriculum reflects the knowledge and skill sets required for entry level engineering technology positions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	6	50.0	50.0	50.0
	Strongly Agree	6	50.0	50.0	100.0
	Total	12	100.0	100.0	

q1.b The courses are current and relevant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	8.3	8.3
	Somewhat Agree	9	75.0	75.0	83.3
	Strongly Agree	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

q1.c The curriculum is concentrated in appropriate subjects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	16.7	16.7	16.7
	Somewhat Agree	8	66.7	66.7	83.3
	Strongly Agree	2	16.7	16.7	100.0
	Total	12	100.0	100.0	

q1.d The curriculum is routinely reviewed and revised when needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	7	58.3	58.3	58.3
	Strongly Agree	5	41.7	41.7	100.0

	Total	12	100.0	100.0	

q1.e Advisory committee input is an integral component of curriculum development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	4	33.3	33.3	33.3
	Strongly Agree	8	66.7	66.7	100.0
	Total	12	100.0	100.0	

q1.f The curriculum allows the student to select specialization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	8.3	9.1	9.1
	Neutral	2	16.7	18.2	27.3
	Somewhat Agree	6	50.0	54.5	81.8
	Strongly Agree	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q1.g The emphasis areas are indicative of industry trends and needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	8.3	8.3	8.3
	Neutral	3	25.0	25.0	33.3
	Somewhat Agree	7	58.3	58.3	91.7
	Strongly Agree	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q1.h The Auto Service Technology curriculum is a crucial component of the AET curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	2	16.7	16.7	16.7
	Neutral	4	33.3	33.3	50.0
	Somewhat Agree	2	16.7	16.7	66.7
	Strongly Agree	4	33.3	33.3	100.0
	Total	12	100.0	100.0	

q1.i AET graduates are well prepared for industry employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	8.3	8.3
	Somewhat Agree	4	33.3	33.3	41.7
	Strongly Agree	7	58.3	58.3	100.0
	Total	12	100.0	100.0	

q1.j The Service Floor is a valuable component of the AET curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	8.3	8.3	8.3
	Neutral	2	16.7	16.7	25.0
	Somewhat Agree	4	33.3	33.3	58.3
	Strongly Agree	5	41.7	41.7	100.0
	Total	12	100.0	100.0	

q1.k The AET program should continue ABET accreditation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	16.7	16.7	16.7
	Somewhat Agree	2	16.7	16.7	33.3
	Strongly Agree	8	66.7	66.7	100.0
	Total	12	100.0	100.0	

q1.I The curriculum should expand into additional areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	5	41.7	41.7	41.7
	Somewhat Agree	1	8.3	8.3	50.0
	Strongly Agree	6	50.0	50.0	100.0
	Total	12	100.0	100.0	

q2 Feel curr should expand, identify areas here

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	41.7	41.7	41.7
	electrochemistry, polymers, calibration, electrification	1	8.3	8.3	50.0
	Emissions and Electronics (body/chassis equipment)are quickly becoming more important, advanced and specialized in the industry. Classes should be expanded or developed to look deep into the systems and future designs/developments.	1	8.3	8.3	58.3
	Expanding in the areas of electronic control interfaces including CAN systems is a necessary addition as most modern vehicles have elaborate CAN systems. In many cases this will give students a leg up and help them find a specialty.	1	8.3	8.3	66.7
	Exposure to some type of program management. Not necessarily from the perspective of a manager, but from that of an engineer in a project oriented environment. How to work with customer expectations and deliverables and a large team (greater than 5 or 6 people). I am not suggesting a whole course but possibly integrate it into a course	1	8.3	8.3	75.0

	in which there is a large project which spans a whole semester or two. The S.A.E. Baja project could make use of something like Microsoft project for planning the project and assigning tasks to the students. The small group decision making course seems limited in scope (which is fine for smaller businesses) compared to the demands of global projects many companies are working on.				
	Hands on diagnostics is a critical skill for automotive engineers which sets Ferris grads apart from the BSME candidates in the job market. However, they are lacking knoweldge of CAN. A class that includes hands on CAN diagnotics would highly increase their would increase opportunites for grads. Also, continue to expand on Hybrid Electric Vehicle and Battery Management Systems. Although these areas may be more suited for BSME/BSEE curriculum, there is still a need for hands on diagnostics, support of experiemental fleet vehicles, and testing which would be a good fit for Ferris AET grads.	1	8.3	8.3	83.3
	Product testing and development is one of the largest fields for potential graduates of any engineering technology program. The program provided me with little to no hands-on experience with data acquisition systems, instrumentation, PLC's and various other testing equipment and procedures.	1	8.3	8.3	91.7
	There needs to be more focus on physics. Most of the graduates long to become Engineers which requires more math and science backgoround than service floor technician skills.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q3 Comments on curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	58.3	58.3	58.3
	I believe the program has advanced since its beginning, I also feel that the students learn good troubleshooting skills. Problem solving using statistical anlaysis is amust int eh automotive industry, too.	1	8.3	8.3	66.7
	It was generally agreed that students should have some options on class selection to allow some specialization in an area which is most appealing to them. The 'broad' overview which the program offers is agreed to give students a great set of skills to go into many fields in the industry but one or two elective specialty classes would help them stand-out in a particular area of thier interest.	1	8.3	8.3	75.0
	students wanted more access to labs and garage areas between sessions, to enhance their knowledge with hands-on	1	8.3	8.3	83.3
	The curriculum has evolved significantly since my graduation in 2003. There are many more opportunites for students graduating today. I do believe the Service Technology courses help in acclimation to the automotive environment for engineering students. However, I do not believe the advanced depth is necessary for the engineering students. Possibly the in depth auto courses can be maintained for students who wish to pursue the service orientated environment. However, for engineering bound students, I believe some of the courses could be combined. Basic electronics could be shared between service and engineering students. Something like emissions and chassis electrical could be	1	8.3	8.3	91.7

	combined for engineering students. Just as automatic transmissions, manual transmissions, and brakes/drivelines could be combined. I don't know that engineering students need to see both G.M. and Ford transmission internals. Instead of the combined classes being service oriented, make them engineering orientated.				
	While hands-on experience is essential in a technical role, I feel the importance and concentration of automotive service related classes is FAR too high. Despite how AET was developed as a 2+2 initially, I feel it can grow far beyond a service-oriented foundation.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q4.a The program outcomes are aligned with preparing the student for entry level engineering technology positions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	8	66.7	72.7	72.7
	Strongly Agree	3	25.0	27.3	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q4.b The program outcomes are current and relevant to the industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	9.1	9.1
	Somewhat Agree	6	50.0	54.5	63.6
	Strongly Agree	4	33.3	36.4	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		

Total		12	100.0		

q4.c The outcomes are routinely reviewed and revised when needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	9.1	9.1
	Somewhat Agree	6	50.0	54.5	63.6
	Strongly Agree	4	33.3	36.4	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q4.d The outcomes insure the comprehensive development of the student: knowledge, abilities, work ethic, and communication skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	16.7	18.2	18.2
	Somewhat Agree	7	58.3	63.6	81.8
	Strongly Agree	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q4.e The program outcomes encourage students to excel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	10.0	10.0
	Somewhat Agree	6	50.0	60.0	70.0
	Strongly Agree	3	25.0	30.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q4.f ASE certification is required for employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	16.7	18.2	18.2
	Somewhat Disagree	2	16.7	18.2	36.4
	Neutral	4	33.3	36.4	72.7
	Somewhat Agree	2	16.7	18.2	90.9
	Strongly Agree	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q4.g ASE certification should be required for graduation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	8.3	9.1	9.1
	Somewhat Disagree	3	25.0	27.3	36.4
	Neutral	3	25.0	27.3	63.6
	Somewhat Agree	2	16.7	18.2	81.8
	Strongly Agree	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q5 ASE certification areas most important on job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	66.7	66.7	66.7
	All of them	1	8.3	8.3	75.0
	Master Automotive certification for our industry.	1	8.3	8.3	83.3
	None	1	8.3	8.3	91.7

	None of my ASE certifications were applicable in my job field. Post graduation work was heavily involved with data acquisition systems and sound/vibration testing.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q6 ASE certification areas least important on job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	75.0	75.0	75.0
	N/A	2	16.7	16.7	91.7
	None	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q7 Comments on outcomes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		6	50.0	50.0	50.0
	ASE certification is not needed for 100% of the jobs I applied for after graduation. In interviews on the hiring side, I found the company I work for did not even consider ASE certification to be an asset.	1	8.3	8.3	58.3
	I am not entirely familiar with the ASE certifications. I know that our Crash Lab entry level posiitons benefit from the AE certifications (brakes, havac, etc).	1	8.3	8.3	66.7
	I do not find that ASE's are essential for employment but I strongly believe they should be encouraged and/or necessary for graduation. The ASE's not only show the students comprehend the information but they are able to utilize it in thinking through issues. Students may find a position which	1	8.3	8.3	75.0

	never require the direct use of the ASE's but employers realize the benefit of an individual who can understand technical information but also utilize it. This could be a very unique aspect of Ferris Student's to employers which separates them from an Mechanical Engineer or Electrical Engineer.				
	no direct experience with outcomes, sorry	1	8.3	8.3	83.3
	Specific ASE certifications would depend on the specific job. However, any ASE certification shows technical knowledge and the ability to convey that knowledge.	1	8.3	8.3	91.7
	The graduates who have done internships at Autoliv have always excelled in the test lab environment. I believe the hands on and lab learning environment has made these individuals successful. Enough so, they are now migrating from the test labs and into the program engineering environment (project based). Others have stayed in the test goup as they have enjoyed this environment.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q8.a The facilities are well organized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	9.1	9.1
	Somewhat Agree	9	75.0	81.8	90.9
	Strongly Agree	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q8.b The facilities are well utilized

	Frequency	Percent	Valid Percent	Cumulative

					Percent
Valid	Somewhat Disagree	1	8.3	10.0	10.0
	Neutral	3	25.0	30.0	40.0
	Somewhat Agree	5	41.7	50.0	90.0
	Strongly Agree	1	8.3	10.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q8.c The facility reflects the quality of the program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	2	16.7	18.2	18.2
	Neutral	4	33.3	36.4	54.5
	Somewhat Agree	5	41.7	45.5	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q8.d The AET program should have designated classrooms and labs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	8.3	9.1	9.1
	Somewhat Agree	4	33.3	36.4	45.5
	Strongly Agree	6	50.0	54.5	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q8.e Lab facilities are conducive to studies required by the AET curriculum

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Neutral	4	33.3	36.4	36.4
	Somewhat Agree	5	41.7	45.5	81.8
	Strongly Agree	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q8.f Additional lab space is needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	25.0	27.3	27.3
	Somewhat Agree	5	41.7	45.5	72.7
	Strongly Agree	3	25.0	27.3	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q8.g Enhancement of the facility would benefit enrollment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	2	16.7	18.2	18.2
	Somewhat Agree	2	16.7	18.2	36.4
	Strongly Agree	7	58.3	63.6	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q9 Comments on facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		5	41.7	41.7	41.7
	During my tenure in the AET program, having all of the automotive programs in one	1	8.3	8.3	50.0

	building was beneficial. Professors/Instructors were readily available to discuss questions or concerns. It was also an environment which was conducive to team building. I believe the addition of the S.A.E. involvement takes this a step further.				
	Facilities are dated. Could use updating.	1	8.3	8.3	58.3
	Feedback from students indicates that lab facilities are under-utilized. Although there would be some logistics (i.e. supervision) more available lab time can improve learning.	1	8.3	8.3	66.7
	It is hard to comment on this area, I only see the facility once per year. Labs that require data acquisition and data analysis is a must in the engineering tech field.	1	8.3	8.3	75.0
	students commented that many labs have an insufficient number of stations, some participants are forced to wait and watch or simply make notes	1	8.3	8.3	83.3
	The automotive building is old and in need of renovation. It hardly presents the image of a top-teir school. I am pleased with the improvements made in the last couple years, however I feel a lot more is needed.	1	8.3	8.3	91.7
	There is concern for equipment in labs. Machining tools are very old, fluids and lubes lab equipment is out of date and lacking in capability and dyno/flow labs should be available for more student time on idividual projects.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q10.a Equipment is modern and reflects industry standards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	2	16.7	18.2	18.2
	Neutral	2	16.7	18.2	36.4

	Somewhat Agree	7	58.3	63.6	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q10.b The equipment is adequate for instructional purposes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	25.0	27.3	27.3
	Somewhat Agree	7	58.3	63.6	90.9
	Strongly Agree	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q10.c Additional equipment is needed for specific classes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	4	33.3	36.4	36.4
	Somewhat Agree	4	33.3	36.4	72.7
	Strongly Agree	3	25.0	27.3	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q10.d Greatly benefit from the acquisition of additional equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	3	25.0	27.3	27.3
	Somewhat Agree	1	8.3	9.1	36.4
	Strongly Agree	7	58.3	63.6	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		

Total	12	100.0		

q11 Identify specific classes need additional equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		7	58.3	58.3	58.3
	Auto 320 Dynamometer Testing - A programmable ECM is needed to allow students the ability to modify calibrations and measure the effects in a lab setting.	1	8.3	8.3	66.7
	bring in manufacturer reps to show off the latest and greatest industrial instruments/software to make students aware of what they can expect to see once they graduate, they will be more valuable to potential employers and reps benefit from possible future sales	1	8.3	8.3	75.0
	Data Acquisition and softweare for doing data analysis is a must (such as accelerometers, load cells, etc)	1	8.3	8.3	83.3
	I have not been able to attend for the past two years. The addition of the chassis dyno is another step in the right direction. Since technology is obsolete at an exponential rate, it is important to be as up to date as possible. Items such as high end data acquisition systems are nice to have, but simple and slower ones are just fine for an educational setting.	1	8.3	8.3	91.7
	Machining and fluids/lubes.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q12 What equipment acquisitions would benefit program

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid		9	75.0	75.0	75.0
	Again, without being there in two years it is hard to say what is or what is not needed. I believe data acquision systems would be a step in the right direction. National Instruments makes modules which can be plugged into a USB cable and then a variety of sensors attached. I think they have education/student discounts as well. Depending on the price, the students could purchase as they would tools for service floor (or in place of).	1	8.3	8.3	83.3
	energy storage (battery) cyclers, thermal chambers, thermal imaging camera, thermocouples, load cells, data acquisition system (i.e. National Instruments or Fluke NetDAQ)	1	8.3	8.3	91.7
	Up to date machining tools and fluids/lubes testing equipment.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q13 Comments on equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		11	91.7	91.7	91.7
	N/A	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q14.a The Advisory Committee performs a valuable function

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	2	16.7	18.2	18.2
	Strongly Agree	9	75.0	81.8	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		

Total	12	100.0		

q14.b Input provided by the Advisory Committee is promptly acted upon

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	8.3	9.1	9.1
	Neutral	4	33.3	36.4	45.5
	Somewhat Agree	5	41.7	45.5	90.9
	Strongly Agree	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q14.c The Advisory Committee should meet more often

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	3	25.0	27.3	27.3
	Neutral	6	50.0	54.5	81.8
	Somewhat Agree	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q14.d More members are needed on the committee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	8.3	10.0	10.0
	Neutral	5	41.7	50.0	60.0
	Somewhat Agree	4	33.3	40.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q14.e The department's report to the committee is comprehensive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	6	50.0	54.5	54.5
	Somewhat Agree	5	41.7	45.5	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q14.f The department's report to the committee is informative

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	5	41.7	45.5	45.5
	Somewhat Agree	6	50.0	54.5	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q15 Feel committee should meet more often, how often

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		8	66.7	66.7	66.7
	2 times per year	1	8.3	8.3	75.0
	At least once a year, but not more than twice.	1	8.3	8.3	83.3
	meetings should only occur as often as the curriculum is permitted to be changed	1	8.3	8.3	91.7
	Neutral on this, but feel that some online interaction could be done through the year (semi-annually or quarterly) and could gather more feedback and support.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q16.a Technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	1	8.3	9.1	9.1
	Competent	8	66.7	72.7	81.8
	Surpasses Expectations	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.b Mechanical skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	8	66.7	72.7	72.7
	Surpasses Expectations	3	25.0	27.3	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.c Task organizational practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	2	16.7	18.2	27.3
	Competent	7	58.3	63.6	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.d Application of efficient work habits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	3	25.0	27.3	36.4
	Competent	7	58.3	63.6	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.e Ability to learn new procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	1	8.3	9.1	9.1
	Competent	9	75.0	81.8	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.f Cooperation with co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	2	16.7	20.0	20.0
	Competent	7	58.3	70.0	90.0
	Surpasses Expectations	1	8.3	10.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q16.g Relationships with co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	2	16.7	18.2	18.2

	Competent	7	58.3	63.6	81.8
	Surpasses Expectations	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.h Cooperation with supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	1	8.3	9.1	18.2
	Competent	6	50.0	54.5	72.7
	Surpasses Expectations	3	25.0	27.3	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.i Relationships with supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	1	8.3	9.1	18.2
	Competent	8	66.7	72.7	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.j Demonstrates effective leadership qualities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	5	41.7	45.5	45.5

	Competent	6	50.0	54.5	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.k Level of confidence to complete tasks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	2	16.7	18.2	18.2
	Competent	9	75.0	81.8	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.l Ability to diagnose unanticipated problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	3	25.0	27.3	36.4
	Competent	6	50.0	54.5	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.m Interest in developing technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	1	8.3	9.1	9.1
	Competent	6	50.0	54.5	63.6
	Surpasses Expectations	4	33.3	36.4	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		

Total		12	100.0		

q16.n Verbal communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	4	33.3	36.4	36.4
	Competent	6	50.0	54.5	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.o Written communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	3	25.0	27.3	36.4
	Competent	6	50.0	54.5	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.p Ability to interact with customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	2	16.7	18.2	18.2
	Developing Competence	2	16.7	18.2	36.4
	Competent	6	50.0	54.5	90.9
	Surpasses Expectations	1	8.3	9.1	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		

Total		12	100.0		

q16.q Exercises safe work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	9.1	9.1
	Developing Competence	2	16.7	18.2	27.3
	Competent	6	50.0	54.5	81.8
	Surpasses Expectations	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System	1	8.3		
Total		12	100.0		

q16.r Appearance and neatness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	3	25.0	30.0	30.0
	Competent	7	58.3	70.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q16.s Demonstrates ethical work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Observed	1	8.3	10.0	10.0
	Developing Competence	2	16.7	20.0	30.0
	Competent	7	58.3	70.0	100.0
	Total	10	83.3	100.0	
Missing	System	2	16.7		
Total		12	100.0		

q17 Recommendations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	75.0	75.0	75.0
	As discussed during on-site visit, earlier involvement with underclassmen would be appreciated so these students are starting to prepare for their career. General Motors' recruiting plan currently includes a preference for sophomore level students to allow at least two summers of work prior to full time employment. This would be good for students to have multiple opportunities with different companies as well.	1	8.3	8.3	83.3
	many students commented on informational overlap between different courses and would like that duplicate segment to be replaced with new material or enhanced learning, students would like courses (perhaps 400 level) that provide present-day information to prepare them for specific jobs... like chassis rolls or calibration, concern was expressed that a number of instructors don't tailor their tests to the intensity of learning during the course (the ratio of questions on a particular topic should reflect the amount of time spent within the course learning it	1	8.3	8.3	91.7
	N/A.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

q18 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		9	75.0	75.0	75.0
	Also, we view the Ferris Automotive programs as complimenting entities. I	1	8.3	8.3	83.3

	strongly encourage the AET and AMGT programs to work together in developing students and future automotive experts.				
	concern raised about some instructors that their teaching style leans toward the lecture, rather than participatory.	1	8.3	8.3	91.7
	I believe more time with the students to hear their questions or discuss what we do. In the past it has been limited by the amount of time between classes and their schedules. I am not sure if moving a student meeting to an early evening session would help with this (but may have an impact on attendance of Advisory Committee.	1	8.3	8.3	100.0
	Total	12	100.0	100.0	

AET/AUSV APR...AUSV Advisory Board

Frequencies

Prepared by: Institutional Research & Testing, 05/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation
q1.a The curriculum reflects the knowledge and skill sets required for entry level automotive technician positions	3	0	4.67	5.00	.577
q1.b The courses are current and relevant	3	0	4.33	4.00	.577
q1.c The curriculum is concentrated in appropriate subjects	3	0	5.00	5.00	.000
q1.d The curriculum is routinely reviewed and revised when needed	3	0	4.67	5.00	.577
q1.e Advisory committee input is an integral component of curriculum development	3	0	4.67	5.00	.577

q1.f The curriculum allows the student to select specialization	3	0	4.33	5.00	1.155
q1.g The emphasis areas are indicative of industry trends and needs	3	0	3.33	3.00	1.528
q1.h Auto Service graduates are well prepared for industry employment	3	0	4.67	5.00	.577
q1.i The Service Floor is a valuable component of the Auto Service curriculum	3	0	5.00	5.00	.000
q1.j The Auto Service program should continue to be NATEF accredited	3	0	5.00	5.00	.000
q1.k The curriculum should expand into additional areas	3	0	5.00	5.00	.000
q2 Feel curr should expand, identify areas here	3	0			
q3 Comments on curriculum	3	0			
q4.a The program outcomes are aligned with preparing the student for entry level automotive service technology positions	3	0	5.00	5.00	.000
q4.b The program outcomes are current and relevant to the industry	3	0	4.67	5.00	.577
q4.c The outcomes are routinely reviewed and revised when needed	3	0	4.67	5.00	.577
q4.d The outcomes insure the comprehensive development of the student: knowledge, abilities, work ethic, and communication skills	3	0	4.67	5.00	.577
q4.e The program outcomes encourage students to excel	3	0	5.00	5.00	.000
q4.f ASE certification is required for employment	2	1	4.50	4.50	.707
q4.g ASE certification should be required for graduation	3	0	4.33	5.00	1.155
q5 ASE certification areas most important on job	3	0			
q6 ASE certification areas least important on job	3	0			
q7 Comments on outcomes	3	0			
q8.a The facilities are well organized	3	0	4.67	5.00	.577
q8.b The facilities are well utilized	2	1	4.50	4.50	.707

q8.c The facility reflects the quality of the program	3	0	4.33	4.00	.577
q8.d Lab facilities are conducive to studies required by the Auto Service curriculum	3	0	4.33	4.00	.577
q8.e Additional lab space is needed	3	0	4.33	5.00	1.155
q8.f Enhancement of the facility would benefit enrollment	3	0	4.33	5.00	1.155
q9 Comments on facilities	3	0			
q10.a Equipment is modern and reflects industry standards	3	0	4.00	5.00	1.732
q10.b The equipment is adequate for instructional purposes	3	0	4.00	5.00	1.732
q10.c Additional equipment is needed for specific classes	3	0	4.00	5.00	1.732
q10.d The program would greatly benefit from the acquisition of additional equipment	3	0	5.00	5.00	.000
q11 Identify specific classes need additional equipment	3	0			
q12 What equipment acquisitions would benefit program	3	0			
q13 Comments on equipment	3	0			
q14.a The Advisory Committee performs a valuable function	3	0	5.00	5.00	.000
q14.b Input provided by the Advisory Committee is promptly acted upon	3	0	3.67	4.00	1.528
q14.c The Advisory Committee should meet more often	3	0	3.00	3.00	2.000
q14.d More members are needed on the committee	3	0	2.33	3.00	1.155
q14.e The department's report to the committee is comprehensive	3	0	4.67	5.00	.577
q14.f The department's report to the committee is informative	3	0	4.67	5.00	.577
q15.a Technical knowledge	3	0	4.67	5.00	.577
q15.b Mechanical skill level	3	0	4.33	4.00	.577
q15.c Task organizational practices	3	0	4.33	4.00	.577
q15.d Application of efficient work habits	3	0	4.67	5.00	.577
q15.e Ability to learn new procedures	3	0	4.33	4.00	.577

q15.f Cooperation with co-workers	3	0	4.67	5.00	.577
q15.g Relationships with co-workers	3	0	4.67	5.00	.577
q15.h Cooperation with supervisors	3	0	4.67	5.00	.577
q15.i Relationships with supervisors	3	0	4.67	5.00	.577
q15.j Demonstrates effective leadership qualities	3	0	4.33	4.00	.577
q15.k Level of confidence to complete tasks	3	0	4.33	4.00	.577
q15.l Ability to diagnose unanticipated problems	3	0	4.33	4.00	.577
q15.m Interest in developing technical knowledge	3	0	4.67	5.00	.577
q15.n Verbal communication skill level	3	0	4.33	4.00	.577
q15.o Written communication skill level	3	0	4.33	4.00	.577
q15.p Ability to interact with customers	3	0	4.00	4.00	1.000
q15.q Exercises safe work practices	3	0	4.67	5.00	.577
q15.r Appearance and neatness	3	0	4.00	4.00	1.000
q15.s Demonstrates ethical work practices	3	0	4.67	5.00	.577
q16 Recommendations	3	0			
q17 Additional comments	3	0			

Frequency Table

q1.a The curriculum reflects the knowledge and skill sets required for entry level automotive technician positions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q1.b The courses are current and relevant

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	2	66.7	66.7	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q1.c The curriculum is concentrated in appropriate subjects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q1.d The curriculum is routinely reviewed and revised when needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q1.e Advisory committee input is an integral component of curriculum development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q1.f The curriculum allows the student to select specialization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q1.g The emphasis areas are indicative of industry trends and needs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	33.3	33.3	33.3
	Neutral	1	33.3	33.3	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q1.h Auto Service graduates are well prepared for industry employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q1.i The Service Floor is a valuable component of the Auto Service curriculum

	Frequency	Percent	Valid Percent	Cumulative

					Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q1.j The Auto Service program should continue to be NATEF accredited

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q1.k The curriculum should expand into additional areas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q2 Feel curr should expand, identify areas here

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	33.3	33.3	33.3
	diesel fuel, hydrid vehicles,	1	33.3	33.3	66.7
	Include Diesel fuels and engines in more depth.At least one hybrid class should be included in the curriculum.	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q3 Comments on curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	It seems like Greg Key is not in full support of the two year program. It would be nice it there was an action plan in place to get newer vehicles to train on.	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q4.a The program outcomes are aligned with preparing the student for entry level automotive service technology positions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q4.b The program outcomes are current and relevant to the industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q4.c The outcomes are routinely reviewed and revised when needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q4.d The outcomes insure the comprehensive development of the student: knowledge, abilities, work ethic, and communication skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q4.e The program outcomes encourage students to excel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q4.f ASE certification is required for employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	50.0	50.0
	Strongly Agree	1	33.3	50.0	100.0
	Total	2	66.7	100.0	
Missing	System	1	33.3		
Total		3	100.0		

q4.g ASE certification should be required for graduation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q5 ASE certification areas most important on job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	33.3	33.3	33.3
	brakes,electrical,engine performance, suspension and steering, heating and air conditioning	1	33.3	33.3	66.7
	elec/electtronics	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q6 ASE certification areas least important on job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	33.3	33.3	33.3
	engine repair manual drive train	1	33.3	33.3	66.7
	manual trans	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q7 Comments on outcomes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3	100.0	100.0	100.0

q8.a The facilities are well organized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q8.b The facilities are well utilized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	50.0	50.0
	Strongly Agree	1	33.3	50.0	100.0
	Total	2	66.7	100.0	
Missing	System	1	33.3		
Total		3	100.0		

q8.c The facility reflects the quality of the program

	Frequency	Percent	Valid Percent	Cumulative

					Percent
Valid	Somewhat Agree	2	66.7	66.7	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q8.d Lab facilities are conducive to studies required by the Auto Service curriculum

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	2	66.7	66.7	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q8.e Additional lab space is needed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q8.f Enhancement of the facility would benefit enrollment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q9 Comments on facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	Students are paying alot of money to attend	1	33.3	33.3	100.0

	Ferris State they should have up to vehicles to train with. What makes Ferris State University better than a community college? Is there a action plan for recruiting students?				
	Total	3	100.0	100.0	

q10.a Equipment is modern and reflects industry standards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q10.b The equipment is adequate for instructional purposes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q10.c Additional equipment is needed for specific classes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q10.d The program would greatly benefit from the acquisition of additional equipment

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Agree	3	100.0	100.0	100.0

q11 Identify specific classes need additional equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	HVAC and FUELS	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q12 What equipment acquisitions would benefit program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	New fuel pressure gauges and New A/C leak sniffers	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q13 Comments on equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	Alot of the equipment is old and out of date.	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q14.a The Advisory Committee performs a valuable function

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	100.0	100.0	100.0

q14.b Input provided by the Advisory Committee is promptly acted upon

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Disagree	1	33.3	33.3	33.3
	Somewhat Agree	1	33.3	33.3	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q14.c The Advisory Committee should meet more often

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	33.3	33.3	33.3
	Neutral	1	33.3	33.3	66.7
	Strongly Agree	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q14.d More members are needed on the committee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	1	33.3	33.3	33.3
	Neutral	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q14.e The department's report to the committee is comprehensive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q14.f The department's report to the committee is informative

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Somewhat Agree	1	33.3	33.3	33.3
	Strongly Agree	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.a Technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.b Mechanical skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.c Task organizational practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.d Application of efficient work habits

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3

	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.e Ability to learn new procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.f Cooperation with co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.g Relationships with co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.h Cooperation with supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.i Relationships with supervisors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.j Demonstrates effective leadership qualities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.k Level of confidence to complete tasks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.l Ability to diagnose unanticipated problems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.m Interest in developing technical knowledge

	Frequency	Percent	Valid Percent	Cumulative

					Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.n Verbal communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.o Written communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	2	66.7	66.7	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.p Ability to interact with customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	1	33.3	33.3	33.3
	Competent	1	33.3	33.3	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.q Exercises safe work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3

	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q15.r Appearance and neatness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Developing Competence	1	33.3	33.3	33.3
	Competent	1	33.3	33.3	66.7
	Surpasses Expectations	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q15.s Demonstrates ethical work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Competent	1	33.3	33.3	33.3
	Surpasses Expectations	2	66.7	66.7	100.0
	Total	3	100.0	100.0	

q16 Recommendations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7
	Check with scrap yards for newer trining props, check with insurance companys about getting totaled vehicles as training props	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

q17 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	66.7	66.7	66.7

	Everybody needs to put 100% into this program for it to be successful.	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

APR...AUSV Employer

Frequencies

Prepared by: Institutional Research & Testing, 08/12

Statistics

	N				
	Valid	Missing	Mean	Median	Std. Deviation
q1 Company Name	2	0			
q2 Name of supervisor	2	0			
q3 Title	2	0			
q4 FSU employee job title	2	0			
q5 Date employee was hired	2	0			
q6.a Overall technical knowledge	2	0	4.00	4.00	.000
q6.b Mechanical skill level	2	0	3.50	3.50	.707
q6.c Task organizational practices	2	0	4.00	4.00	1.414
q6.d Leadership qualities	2	0	3.50	3.50	2.121
q6.e Level of confidence to complete tasks	2	0	3.50	3.50	2.121
q6.f Interest in developing technical knowledge	2	0	5.00	5.00	.000
q6.g Verbal communication skill level	2	0	4.50	4.50	.707
q6.h Written communication skill level	2	0	4.50	4.50	.707
q6.i Exercises safe work practices	2	0	5.00	5.00	.000
q7 Comments on any of Q6 items	2	0			
q8 Comments on any of Q6 items	2	0			
q9 Comments on any of Q6 items	2	0			
q10 Employee's judgment	2	0	4.00	4.00	.000
q11 Elaboration on Q10 response	2	0			
q12 Employee's ability to learn	2	0	3.00	3.00	1.414

q13 Elaboration on Q12 response	2	0			
q14 Employee's ability & willingness to adjust to supervision	2	0	3.50	3.50	.707
q15 Elaboration on Q14 response	2	0			
q16 Employee's attendance	2	0	3.00	3.00	.000
q17 Elaboration on Q16 response	2	0			
q18 Employee's punctuality	2	0	4.00	4.00	.000
q19 Elaboration on Q18 response	2	0			
q20 Employee's attitude-application to work	2	0	4.00	4.00	1.414
q21 Elaboration on Q20 response	2	0			
q22 Employee's dependability	2	0	4.50	4.50	.707
q23 Elaboration on Q22 response	2	0			
q24.a Quality of work	2	0	4.50	4.50	.707
q24.b Personal appearance	2	0	5.00	5.00	.000
q24.c Capacity to handle interruptions, errors, additional assignments, telephone calls, questions from fellow employees, and at the same time maintain the pace of regular work activities	2	0	4.00	4.00	1.414
q25 Comments on any of Q24 items	2	0			
q26 Opinion of future success of this person in this industry	2	0	4.50	4.50	.707
q27 Elaboration on Q26 response	2	0			
q28 Strong characteristics person possesses	2	0			
q29 Weak characteristics may hinder person's future success	2	0			
q30 Favorably included to employ more FSU AUSV grads & why/why not	2	0			
q31 Overall impressions of the AUSVT program	2	0			
q32 Strengths of the AUSV program	2	0			
q33 Weaknesses of the AUSV program	2	0			
q34 How could the AUSV program be improved	2	0			
q35 Additional comments	2	0			

Frequency Table

q1 Company Name

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	LAND ROVER FARMINGTON HILLS	1	50.0	50.0	50.0
	Urka Auto Center	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q2 Name of supervisor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Mike Chynoweth	1	50.0	50.0	50.0
	Tom Urka	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q3 Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Service Manager	1	50.0	50.0	50.0
	Service Mgr.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q4 FSU employee job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Auto Technician	1	50.0	50.0	50.0
	Tech.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q5 Date employee was hired

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	05/07/12	1	50.0	50.0	50.0
	05/26/09	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.a Overall technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	2	100.0	100.0	100.0

q6.b Mechanical skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	50.0	50.0	50.0
	4	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.c Task organizational practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	50.0	50.0	50.0
	High	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.d Leadership qualities

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	2	1	50.0	50.0	50.0
	High	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.e Level of confidence to complete tasks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	50.0	50.0	50.0
	High	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.f Interest in developing technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	2	100.0	100.0	100.0

q6.g Verbal communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	50.0	50.0	50.0
	High	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.h Written communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	50.0	50.0	50.0
	High	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q6.i Exercises safe work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	2	100.0	100.0	100.0

q7 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	This is the 2nd student I have employed from Ferris State and I have been very happy with them.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q8 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

q9 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

q10 Employee's judgment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Works well with others	2	100.0	100.0	100.0

q11 Elaboration on Q10 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	I have Anthony work with my other Techs and they all work togather well.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q12 Employee's ability to learn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Rather slow to learn	1	50.0	50.0	50.0
	Learns readily	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q13 Elaboration on Q12 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	Show him once and he remembers.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q14 Employee's ability & willingness to adjust to supervision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Average	1	50.0	50.0	50.0
	Above average	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q15 Elaboration on Q14 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	Anthony does what is asked of him no problem	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q16 Employee's attendance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Outstanding	2	100.0	100.0	100.0

q17 Elaboration on Q16 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	Only missed one day that was prearanged.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q18 Employee's punctuality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arrives on time	2	100.0	100.0	100.0

q19 Elaboration on Q18 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

q20 Employee's attitude-application to work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Average in diligence and interest	1	50.0	50.0	50.0
	Outstanding in enthusiasm	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q21 Elaboration on Q20 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	Always wants to get his hands in there.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q22 Employee's dependability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average in dependability	1	50.0	50.0	50.0
	Completely dependable	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q23 Elaboration on Q22 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	If I give Anthony a task I know it will get done.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q24.a Quality of work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	50.0	50.0	50.0
	Excellent	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q24.b Personal appearance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	2	100.0	100.0	100.0

q24.c Capacity to handle interruptions, errors, additional assignments, telephone calls, questions from fellow employees, and at the same time maintain the pace of regular work activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Average	1	50.0	50.0	50.0
	Excellent	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q25 Comments on any of Q24 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

q26 Opinion of future success of this person in this industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	50.0	50.0	50.0
	Excellent	1	50.0	50.0	100.0

q26 Opinion of future success of this person in this industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	50.0	50.0	50.0
	Excellent	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q27 Elaboration on Q26 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

q28 Strong characteristics person possesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good positive attitude.	1	50.0	50.0	50.0
	Willingness to learn and attitude toward his job.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q29 Weak characteristics may hinder person's future success

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	50.0	50.0	50.0
	Employee is very slow at performing the diagnosis and repairs for most jobs.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q30 Favorably included to employ more FSU AUSV grads & why/why not

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	I would try again but, I would want a 6 month trial period before hiring them full time.	1	50.0	50.0	50.0
	Yes, Ferris State has great instructer's The students I have employed so far have been great. Shane the first student is now a master tech.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q31 Overall impressions of the AUSVT program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Great program	1	50.0	50.0	50.0
	It has deteriorated since losing the corporate programs.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q32 Strengths of the AUSV program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	good solid foundation	1	50.0	50.0	50.0
	New equipment,like the alignment rack and dyno.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q33 Weaknesses of the AUSV program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Having newer vehicles to train on.	1	50.0	50.0	50.0

	Old vehicles to work on.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q34 How could the AUSV program be improved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bring the programs back from the big three.	1	50.0	50.0	50.0
	They need to work to get 1 of the big 3 to be a corporate sponsor. They also nedd to do a better job of recruiting at the high school level.	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

q35 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		2	100.0	100.0	100.0

AET APR...AET Employer

Frequencies

Prepared by: Institutional Research & Testing, 08/12

Statistics

	N			
	Valid	Missing	Mean	Median
q1 Company Name	1	0		
q2 Name of supervisor	1	0		
q3 Title	1	0		
q4 FSU employee job title	1	0		
q5 Date employee was hired	1	0		
q6.a Overall technical knowledge	1	0	5.00	5.00
q6.b Mechanical skill level	1	0	5.00	5.00
q6.c Task organizational practices	1	0	4.00	4.00
q6.d Leadership qualities	1	0	4.00	4.00
q6.e Level of confidence to complete tasks	1	0	4.00	4.00
q6.f Interest in developing technical knowledge	1	0	5.00	5.00
q6.g Verbal communication skill level	1	0	4.00	4.00
q6.h Written communication skill level	1	0	4.00	4.00
q6.i Exercises safe work practices	1	0	5.00	5.00
q7 Comments on any of Q6 items	1	0		
q8 Comments on any of Q6 items	1	0		
q9 Comments on any of Q6 items	1	0		
q10 Employee's judgment	1	0	4.00	4.00
q11 Elaboration on Q10 response	1	0		
q12 Employee's ability to learn	1	0	5.00	5.00
q13 Elaboration on Q12 response	1	0		
q14 Employee's ability & willingness to adjust to supervision	1	0	4.00	4.00
q15 Elaboration on Q14 response	1	0		
q16 Employee's attendance	1	0	3.00	3.00
q17 Elaboration on Q16 response	1	0		
q18 Employee's punctuality	1	0	4.00	4.00

q19 Elaboration on Q18 response	1	0		
q20 Employee's attitude-application to work	1	0	4.00	4.00
q21 Elaboration on Q20 response	1	0		
q22 Employee's dependability	1	0	4.00	4.00
q23 Elaboration on Q22 response	1	0		
q24.a Quality of work	1	0	5.00	5.00
q24.b Personal appearance	1	0	4.00	4.00
q24.c Capacity to handle interruptions, errors, additional assignments, telephone calls, questions from fellow employees, and at the same time maintain the pace of regular work activities	1	0	4.00	4.00
q25 Comments on any of Q24 items	1	0		
q26 Opinion of future success of this person in this industry	1	0	5.00	5.00
q27 Elaboration on Q26 response	1	0		
q28 Strong characteristics person possesses	1	0		
q29 Weak characteristics may hinder person's future success	1	0		
q30 Favorably included to employ more FSU AET grads & why/why not	1	0		
q31 Overall impressions of the AET program	1	0		
q32 Strengths of the AET program	1	0		
q33 Weaknesses of the AET program	1	0		
q34 How could the AET program be improved	1	0		
q35 Additional comments	1	0		

Frequency Table

q1 Company Name

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Autoliv	1	100.0	100.0	100.0

q2 Name of supervisor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Jennifer Benson	1	100.0	100.0	100.0

q3 Title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Seatbelt Durability Lab Supervisor	1	100.0	100.0	100.0

q4 FSU employee job title

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Testing Technician	1	100.0	100.0	100.0

q5 Date employee was hired

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	05/2012	1	100.0	100.0	100.0

q6.a Overall technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	1	100.0	100.0	100.0

q6.b Mechanical skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	1	100.0	100.0	100.0

q6.c Task organizational practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	100.0	100.0	100.0

q6.d Leadership qualities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	100.0	100.0	100.0

q6.e Level of confidence to complete tasks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	100.0	100.0	100.0

q6.f Interest in developing technical knowledge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	1	100.0	100.0	100.0

q6.g Verbal communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	100.0	100.0	100.0

q6.h Written communication skill level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	100.0	100.0	100.0

q6.i Exercises safe work practices

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	1	100.0	100.0	100.0

q7 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q8 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q9 Comments on any of Q6 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q10 Employee's judgment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Works well with others	1	100.0	100.0	100.0

q11 Elaboration on Q10 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lucas communicates well with his co-workers and has established a mutual respect with them.	1	100.0	100.0	100.0

q12 Employee's ability to learn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Learns very quickly	1	100.0	100.0	100.0

q13 Elaboration on Q12 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lucas has been able to process and retain a large amount of information regarding seatbelt testing.	1	100.0	100.0	100.0

q14 Employee's ability & willingness to adjust to supervision

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	100.0	100.0	100.0

q15 Elaboration on Q14 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I have not had any issues with Lucas. He comes to me with appropriate questions and concerns, and listens well and learns well.	1	100.0	100.0	100.0

q16 Employee's attendance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Outstanding	1	100.0	100.0	100.0

q17 Elaboration on Q16 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	On time, every day.	1	100.0	100.0	100.0

q18 Employee's punctuality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arrives on time	1	100.0	100.0	100.0

q19 Elaboration on Q18 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q20 Employee's attitude-application to work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very interested and industrious	1	100.0	100.0	100.0

q21 Elaboration on Q20 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q22 Employee's dependability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average in dependability	1	100.0	100.0	100.0

q23 Elaboration on Q22 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lucas has been willing and able to stay late to complete a test when needed. He understands the need for timelines, time management and task prioritization.	1	100.0	100.0	100.0

q24.a Quality of work

	Frequency	Percent	Valid Percent	Cumulative Percent

q24.a Quality of work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	100.0	100.0	100.0

q24.b Personal appearance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	100.0	100.0	100.0

q24.c Capacity to handle interruptions, errors, additional assignments, telephone calls, questions from fellow employees, and at the same time maintain the pace of regular work activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Above average	1	100.0	100.0	100.0

q25 Comments on any of Q24 items

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	This is a very tough environment to work in, let alone learn in. Lucas has done a great job of adapting to the every changing environment.	1	100.0	100.0	100.0

q26 Opinion of future success of this person in this industry

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	1	100.0	100.0	100.0

q27 Elaboration on Q26 response

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

q28 Strong characteristics person possesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lucas has strong Mechanical skills, as well as a very likeable personality. He gets along well with his co-workers and engineers. He learns quickly, and retains information.	1	100.0	100.0	100.0

q29 Weak characteristics may hinder person's future success

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	In the future, as he has more exposure in this lab, I hope Lucas' confidence increases.	1	100.0	100.0	100.0

q30 Favorably included to employ more FSU AET grads & why/why not

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes. Lucas has been a huge help in the lab this summer, and I plan to keep him on for a long time.	1	100.0	100.0	100.0

q31 Overall impressions of the AET program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I have been happy with my intern.	1	100.0	100.0	100.0

q32 Strengths of the AET program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I do not have enough experience or knowledge of the program to elaborate on this.	1	100.0	100.0	100.0

q33 Weaknesses of the AET program

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I do not have enough experience or knowledge of the program to elaborate on this.	1	100.0	100.0	100.0

q34 How could the AET program be improved

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I do not have enough experience or knowledge of the program to elaborate on this.	1	100.0	100.0	100.0

q35 Additional comments

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	100.0	100.0	100.0

Section 3
Program Profile

Section 3 - A. Profile of students

1) Student Demographic Profile.

e) Gender, race/ethnicity.

	Females	Asian	Hispanic	Black	un know	Alaska	Multy
AET	9	26	10	7	7	1	2
AMGT	1	3	2	2	1		
ASUV	2		1		2	1	1
	12	29	13	9	10	2	3

International **Out of State**

For a grand total of race/ethnic of 78 **26** **80**

	AET	**AMGT**	**AUSV**	
Canada	**11**	**3**	**13 of the Canadians are Asian for a total of 15 Asian**	
China	**2**	**Nigeria**	**1**	
India	**3**	**Saudis**	**3**	
Kuwait	**1**			
Senegal	**1**			
Venezuela	**1**			
	26 international students			
IL	**19**	**7**	**2**	**28 from IL**
FL	**6**			
IN	**5**	**2**	**2**	**9 from IN**
MD	**5**			
OH	**4**			
PA	**3**			
WI	**3**			
VA	**2**			
MA	**2**	**1**		**CO 1 1**

CA	**2**	**NY**	**3**	
AK	**1**	**NJ**	**3**	**2**
AL	**1**	**NC**	**1**	
GA	**1**	**KY**	**1**	

		2010	**2011/12**	
AET	**international**	**16**	**23**	
	Out of State	**40**	**67**	
		56	**90**	
AMGT	**International**	**0**	**3**	
	Out of State	**7**	**13**	
		7	**16**	
AUSV	**International**	**0**	**0**	
	Out of State	**0**	**7**	
			7	
TOTAL	**International**	**16**	**26**	**+10**
	Out of State	**47**	**87**	**+40**
		63	**113**	**+50**

b) In-state and out-of-state.

See attached file (AUTO student data 02_12).

c) Attend classes during the day, in the evenings, and on weekends.

Current enrollment does not allow for the offering of class Sections beyond the regular day.

d) Enrolled in classes on- and off-campus.

Current enrollment does not allow for the offering of class sections Off campus.

e) Discuss how the information presented in (a) through (f) impacts the

curriculum, scheduling, and/or delivery methods in the program.

The program started in 2001 and has increased up to 156 students.

2) Quality of Students.

a) What is the range and average GPA of all students currently enrolled in the program? ACT? Comment on this data.

See attached file (AUTO student data 02_12).

b) What are the range and average GPA's of students graduating from the program? ACT? Comment on this data.

See attached file (AUTO student data 02_12).

c) In addition to ACT and GPA, identify and evaluate measures that are used to assess the quality of students entering the program.

All of the students have to be able to start a math sequence up to and including calculus.

d) Identify academic awards (e.g., scholarships or fellowships) students in the program have earned. Comment on the significance of these awards to the program and students.

Each year the AET program and Department have a number of scholarships that are available to students. This past year, thirteen scholarships worth $20,000 were available.

e) What scholarly/creative activities (e.g., symposium presentations, other presentations or awards) have students in the program participated in? Comment on the significance of these activities to the program and students.

AET students have consistently won the ASE Scholarship every year against Grand Valley and Western Michigan University. Students are required to make classroom presentations in many of their classes. They write numerous research papers in each of their core classes.

AET students win a majority of the Tau Pi Alpha Engineering Society Honors

f) What are other accomplishments of students in the program? Comment on the significance of these accomplishments to the program and students.

The AET program has a student organization called SAE (Society of Automotive Engineers.) The student organization's goals are to build vehicles to compete against all the universities in the country in the Formula and Baja races. Faculty members advise and actively participate with this organization both from the automotive department and across the college.

3) Employability of students.

a) How many graduates have become employed full-time in the field within one year of receiving their degree? Comment on this data.

According to question 18 of the "Graduate Follow-Up Survey Report" for the placement rate for the AET program averaged approximately 100%. Students with a 3.0 or higher GPA, and that are willing to relocate, are faced with having to choose from several offers originating from several different states.

b) What is the average starting salary of graduates who become employed full-time in the field since inception (for new programs) or the last program review? Compare with regional and national trends.

Based on the information contained in the "Graduate Follow-Up Survey Report" the average starting salary for graduates of the AET program was approximately $51,000 annually.

c) How many graduates have become employed as part-time or temporary workers in the field within one year of receiving their degree? Comment on this data.

Students typically are employed as full-time employees or continue their education.

d) Describe the career assistance available to the students. What is student perception of career assistance?

Students have access to the office of Student Employment and Career Services, on campus, where they can seek help in creating and posting a resume, search for prospective employers, view job fair schedules. Faculty also dispense leads as they receive them.

e) How many graduates continue to be employed in the field? Comment on this data.

Recent alumni survey data showed where most respondents

continued to be employed in industry.

f) Describe and comment on the geographic distribution of employed graduates.

Graduates have accepted positions distributed across the continent including positions in Canada. Since as high as fifty-seven percent come from out of state, it is not surprising that many go to work in different states or countries.

g) How many students and/or graduates go on for additional educational training? (Give annual average.) Comment on this data.

In the recent Alumni survey and phone conversation with graduates, when asked about the types of training received since graduation, the most significant number was additional technical training and travel to other countries for training. A number of them ask about ABET accreditation because they are now looking into graduate school. They say most of the graduate programs require a BS from an ABET-accredited program.

h) Where do most students and/or graduates obtain their additional educational training? Comment on this data.

The majority of the additional training is done internally within the corporate environment.

Section 3 - B. Enrollment

1) What is the anticipated fall enrollment for the program?

Based on current figures and past experience, the projected enrollment for Fall 2012 is at 156+13 internationals to be registered for a total of 169. Also, during registration we had at least 5 students that changed their major to AUSV for the TIP financial program. If you multiply 5 students by two years that would be another 10 students for a total of 179.

2) Have enrollment and student credit hour production (SCH) increased or decreased since the last program review? Supply a table and comment on any enrollment trends.

Since 2005 the enrolment has doubled from 80 to 160 so the SCHs have doubled. Furthermore, eleven of the courses in the AET program come from

other areas in the College of Engineering Technology which generate over 5,000 SCHs for the other programs in the CET.

3) Since the last program review, how many students apply to the program annually?

Many people inquire about the program. We give them an outline of the requirements that they will need to meet. It is not known how many come, complete the requirements, and return. However, since we have one of the highest rates of transfer students both in-state and out-of-state, one would suspect that this rate would be high. The number of transfer students this fall is even higher. The GPA is 2.75 in major and 2.5 in general education along with prepared to enter math 126.

4) Of those who apply, how many and what percentage are admitted?

The Admissions Office is not able to provide this data.

5) Of those who are admitted, how many and what percentage enroll?

The Admissions Office is not able to provide this data.

6) What are the program's current enrollment goals, strategy, and efforts to maintain/increase/decrease the number of students in the program? Please explain.

The goal of the AET program is to increase the number of students enrolled in the program by increasing the program quality. The following is a listing of some of the activities planned.

1. AET faculty will continue to participate in career fairs at area vocational centers, community colleges, trade shows and high schools across Michigan and surrounding states.

2. AET faculty will continue marketing the program internally to students in the on-campus associate degree feeder programs.

3. The AET program will offer a new 0+4 program option to compete with other Universities that offer more traditional 4 year degrees.

Section 3 - C. Program Capacity

1) What is the appropriate program enrollment capacity, given the available regulations, and other factors?

Program capacity is appearing to level at around 160 students based upon capacity of the building and availability of faculty.

2) Which of these items limits program enrollment capacity?

Classroom, laboratory, and equipment availability will have a major limiting impact on capacity as the building is shared with the Automotive Management and Automotive Service Technology programs. As AET faculty is also shared with AST, Instructor availability may also impact capacity.

3) Please explain any difference between capacity and current enrollment.

The program has grown to 160 students. There have been a few faculty retirements that leveled the capacity with the enrollment.

Section 3 - D. Retention and Graduation

1) Give the annual attrition rate (number and percent of students) in the program.

No complete and usable information was available from FSU to answer this question with specific data. With the fairly high admission criteria standards, and the diversity of the incoming students, there seems to be a very low attrition rate.

2) What are the program's current goals, strategy and efforts to retain students in the program?

Students come from all over the world for the AET program. We have a very low attrition rate.

3) Describe and assess trends in number of degrees awarded in the program.

Based on Fact Book data, the average graduating class size in the last four years is 40.

4) **How many students who enroll in the program graduate from it within the prescribed time? Comment on any trends.**

On average, how long does it take a student to graduate from the program? Please comment.

Both transfer Students and students with Ferris associate degrees that start the program with their associate degree and have good math skills largely finish in four years.

Section 3 - E. Access

1) **Describe and assess the program's actions to make itself accessible to students. Use examples such as: off-site courses, accelerated courses, other types of flexible learning, use of summer courses, multiple program entry points, e-learning, mixed delivery courses, and scheduling.**

Mixed delivery techniques are applied but the goal is to enhance learning rather than ease of access. Internships are mostly undertaken during the summer months, mostly out of necessity rather than accessibility.

1) **Discuss what effects the actions described in (1) have had on the program. Use examples such as: program visibility, market share, enrollment, faculty load, computer, other resources.**

The need for expanded accessibility has not arisen. The use of mixed delivery has resulted in additional load on the computer resources within the building, but usage is still not to the critical level.

2) **How do the actions described in (1) advance or hinder program goals and priorities?**

We have observed no negative impact upon the program due to a lack of off-site offerings or an expanded schedule.

Section 3 - F. Curriculum

1) **The curriculum review section must also contain appropriate check sheets and example syllabi, which may be attached as an appendix.**

The volume of these materials prohibits inclusion in this report. They have been compiled for the NATEF Certification review in 2010 and are also currently

available in the ABET Self Study in the Automotive Office.

2) **Program Requirements. Describe and assess the program related courses required for graduation.**

   a) As part of the graduation requirements of the current program, list directed electives and directed general education courses. Provide the rationale for these.

      Automotive Engineering Technology students are required to pick an emphasis area. The students must take 12 credits in one of the areas.

      The AET students must complete the following directed general education courses:

      MATH 116, MATH 126, MATH 216 Applied Calculus to complete the quantitative skills needed.

      PHYS 211 and CHEM 114 must be completed for the Scientific Understanding.

      English 311 (Fulfills university requirement for communication competence).

      Communications 221 (Fulfills university requirement for communication competence).

      SURE 331 Ethics in Engineering (Fulfills university requirement for cultural enrichment above 200 level).

      Furthermore, the AET students must complete the rest of the general education electives for Social and cultural enrichment

   b) Indicate any hidden prerequisites (instances where, in order to take a program-required course, the student has to take an additional course. Do not include extra courses taken for remedial purposes)

      There are no hidden prerequisites. We have a five courses sequence with math and physics in the check sheet.

3) **Has the program been significantly revised since the last review, and if so, how?**

   This is the first program review for AET. We recently adjusted the curriculum to:

      A) Meet the VPAA's limit of 128 credits:

1) Elimination of AUTO250 Service Floor
2) Elimination of AUTO116 Engine Electrical

B) Add courses necessary to attain ABET accreditation.

1) Addition of MATH216 Applied Calculus

C) We have added a 0-4 starting point for students that want to come to the University for a Bachelor Degree.

4) Are there any curricular or program changes currently in the review process? If so, what are they?

We need to change the designator so the program can be evaluated for productivity.

5) Are there plans to revise the current program within the next three to five years? If so, what plans are envisioned and why?

Any future curricular changes will be based on the Accreditation review by ABET. We will review their recommendations and make changes accordingly.

Section 3 - G. Quality of instruction

1) Discuss the Student and Alumni perceptions of the quality of instruction.

Based upon feedback from both internships and job placement over the last two years the over all indication is very good. See summary of internship and job placement. Further information and specific data is available in Sections 2-A, C, and D.

2) Discuss the Advisory committee and Employer perceptions of the quality of instruction.

Advisory committee members and employers have already hired for the two back to back years of graduations. Some have hired two to five students over the last three years. We have only been only graduation students for a couple of years. This seems to be a strong indication that both the advisory and employer are very satisfied with the quality of instruction. Further information and specific data is available in Sections 2-B and F.

3) **What departmental and individual efforts have been made to improve the learning environment, add and use appropriate technology, train and increase the number of undergraduate and graduate assistants, etc.?**

Several forms of instructional technology are used by automotive programs. All of the rooms either have computer projectors or we have portable projectors. Two of the automotive department room were remolded as smart room last year because of the growth of the AET program. Web-CT is used by all of the faculty members in the AET program. All of the faculty members either have laptops or have access to them to use with the computers projectors. The Automotive Center was the first building to be wireless. Faculty members have produced a number of course packets and lab packets.

4) **Describe the types of professional development have faculty participated in, in efforts to enhance the learning environment (e.g. Writing Across the Curriculum; Center for Teaching and Learning, etc.).**

Faculty take advantage of training opportunities with manufactures related training. Also they attend classes from the Center for Teaching and Learning. Faculty members have taken part in WebCT training to enhance the program and improve interaction between students and staff.

5) **What efforts have been made to increase the interaction of students with faculty and peers? Include such items as developmental activities, seminars, workshops, guest lectures, special events, and student participation in the Honors Program Symposium.**

- AET students and faculty regularly participate in field trips.
- Ford Testing Center, Chrysler Testing Center, Chicago Emission EPA Testing Center, Ann Arbor Emission Testing Center, Federal EPA Testing Center, an oil refinery in Chicago, Mercedes Benz.
- AET students, COT students and faculty all participate together in Ferris State University's student chapter of Society of Automotive Engineers.

6) **Discuss the extent to which current research and practice regarding inclusive pedagogy and curriculum infuse teaching and learning in this program.**

Students must fulfill an internship and complete an engineering project during that course. The internship gives the student a significant learning experience and a chance to be hired full time. Many have had position created for them

while at the company.

Students use critical thinking skills with their math to apply theory real engineering situations

Projects are used in each of the courses to develop the students to work in small engineering groups.

Students develop their PC skills using many different engineering software packages as well as the standard soft ware (micro soft).

7) What effects have actions described in (5) and (6) had on the quality of teaching and learning in the program?

Using the different faculty in the different engineering programs across the college has exposed the AET students to a much higher level of curriculum, research, and teaching styles. The students have impressed the teachers in the other program with their abilities and interests.

Section 3 - H. Composition and quality of faculty

1) List the names of all tenured and tenure-track faculty by rank.

A) Identify their rank and qualifications.

There is not a separate faculty group in the AET program. We have used the auto service faculty. Please see Auto Service Program Review for this information. The additional faculty from the COT that teach multi-discipline courses are listed in the ABET Self Study Part 1 Review. This is available in the Automotive office and, unfortunately is too large to reproduce here.

B) Indicate the number of promotion or merit awards received by program faculty since the last program review.

All of the faculty that are presently teaching in the AET program are non tenured.

C) Summarize the professional activities of program faculty since inception or the last program review (attendance at professional meetings, poster or platform presentations, responsibilities in professional organizations, etc.).

- WebCT Training

- Faculty Center for Learning and Teaching

Many other activities are too many to list because of the large number of faculty that teach in the program from other departments. Please see their resume in ABET part 1 of the self study.

2) Workload

A) What is the normal, annualized teaching load in the program or Department? Indicate the basis of what determines a "normal" load. On a semester-by-semester basis, how many faculty have accepted an overload assignment?

Load is determined by contractual agreement. Since most of the program is taught be either general educations faculty and faculty within the COT it is hard to say which program causes the overload. The load is distributed over many program faculty. In many cases the program fills seats in the program areas that have lost enrollment. This is very cost effective because they do not run separate class for the AET students.

B) List the activities for which faculty receive release time.

The AET Program Coordinator is allowed release time to fulfill the duties of the position. This is a newly created position just over a year old that allows 25% release time. No other faculty in the AET program receive release time.

3) Recruitment

A) What is the normal recruiting process for new faculty?

We have not hired a faculty for the AET program.

B) What qualifications (academic and experiential) are typically required for new faculty?

The preferred academic requirement is a Master of Science Degree. Minimum of a Bachelor of Science degree with the stipulation that a Master of Science degree must be earned within two years of starting at Ferris. The experiential requirements involve a minimum of five years experience with approximately two years teaching experience, minimum. Almost all of our faculty have secondary teacher education degrees. This means that they only have a two-year associate degree in technical course work. This is why the program uses so many of the engineering faculty from the other programs. The next faculty hired should have a

degree in engineering.

C) What are the program's diversity goals for both gender and race/ethnicity in the faculty?

The FSU COT is rated as 4th best in the United States with race and gender. This illustrates the college's commitment to the professional development and advancement of personnel from non-traditional gender and racial/ethnic groups.

D) Describe and assess the efforts being made to attain goals in (c).

The Department adheres to all University policy and State and Federal Laws regarding non-discrimination and equal opportunity in employment.

4) Orientation. Describe and assess the orientation process for new faculty.

New faculty participates in "New Faculty Training" provided by The Faculty Center for Teaching and Learning. Within the department there hasn't been a need for a formal orientation program as new faculty is updated and informed on a "need to know" basis. The School Director, senior faculty, and clerical staff are available to answer questions and lend guidance as individual needs arise.

5) Reward Structure: e.g., salary, professional development funds, travel funds, UCEL and FSUGR incentive money.

A) Describe the reward structure in the program/department/college as it relates to program faculty. Indicate the type of reward and eligibility criteria.

There are no reward structures in the COT other than the contract promotion cycle.

B) Does the existing salary structure have an impact on the program's ability to recruit and retain quality faculty?

With FSU Automotive salaries below the level of public school teachers, it is difficult to recruit new faculty with an educational background and automotive experience. It will be next to impossible to recruit anyone with Engineering training and experience for the AET program.

C) Is the reward structure currently in place adequate to support faculty productivity in teaching, research, and service? If not, what recommendations would you make to correct the situation.

The AET program has no unique S&E account and must share funding with the Auto Service program. "Timme Grants" have been utilized by faculty to fund special projects and travel. Professional Development Incentive (PDI) moneys provide faculty with funds to be used toward enhancing instructional initiatives and program goals. S&E dollars are used for professional development opportunities such as seminars, travel funds, and conferences.

D) Is enhancing diversity and inclusion a component of the reward structure? Please explain.

Enhancing diversity is not included in the reward structure within the program or department. The Department adheres to all University policy and State and Federal Laws regarding non-discrimination and equal opportunity in employment

6) Graduate Instruction (if applicable)

There is currently no course of study, at the graduate level, in AET.

7) Non-Tenure-Track and Adjunct Faculty.

There are no full-time, non-tenure track or adjunct faculty teaching in the AET program. As of Spring 2007, there will be no faculty, within this classification, teaching in the entire Automotive program.

Section 3 - I. Service to non-majors

1) Identify and describe the General Education service courses provided by the program faculty for other departments at FSU.

Non-existent.

2) Identify and describe any non-General Education service courses or courses required for other programs. Comment on your interaction with the departments or programs for which the courses are provided.

Automotive Service Technology courses can be taken by students enrolled in the technical Writing degree for an Automotive emphasis.

3) **Discuss the impact of the provision of General Education and non-General Education courses has on the program.**

We know of no students who have chosen the Automotive emphasis for Technical Writing.

4) **Does the program plan to increase, decrease, or keep constant its level of service courses? Explain.**

Not currently.

Section 3 - J. Degree program cost and productivity data

Section 3 - K. Assessment and Evaluation

1) **List and describe what variables are tracked and why, when assessing the effectiveness of the program (e.g. mastery of essentials of subject area, graduation rates, employment rates, pass rates on professional exams).**

The following variables are tracked to assess the effectiveness of the program:

Before advancing to the second half of the Automotive Engineering Technology program, students are assessed and are required to have a minimum of a 2.75 (B+) in each of their first two years of Automotive classes and an overall GPA of 2.5 The minimum grade point requirement is a useful gauge in determining the likelihood of student success in the Automotive Engineering Technology program.

Graduate employment rates are tracked through Institutional Research and Testing (IRT). Data is compiled by IRT through the Graduate Follow-Up Survey. The data collected is then assessed to determine the program's effectiveness at providing employers with quality entry level employees.

Graduation rates are tracked through Institutional Research and Testing (IRT). This information is used to compare graduation rates of Ferris' Automotive Engineering Technology students with graduation rates of students from other institutions offering similar programs.

2) Provide trend data for the variables listed in (1). Compare the data to accreditation benchmark standards if applicable, or provide some other type of assessment of the data.

Assessment of data regarding the variables listed in (1) is stated below:

•According to the data provided by Institutional Research and Testing (IRT), the employment rate for graduates from the Automotive Engineering Technology program is at 98%. *(Data provided by 2003-2004 Graduate Follow-Up Survey from IRT)*

The graduation rate for students in the Automotive Engineering Technology program is 98% completion after 2 years for those students that started the program in fall 2001, and 98% completion after 5 years for those students that started the program in fall 2002. *(Data provided by Institutional Research and Testing Official 7"` Day Counts pg. 7)*

To compare, Michigan institutions offering 4 year degrees average a 55% graduation rate after the student has attended for 5 years. *(Data provided by Michigan Lt. Governor's Commission on Higher Education and Economic Growth)*

In addition, the national average for institutions offering 4 year degrees is a 54% graduation rate after attending for 6 years. . *(Data provided by Michigan Lt. Governor's Commission on Higher Education and Economic Growth)*

3) Describe how the trend data in (2) is used to assess the rigor, breadth, and currency of the degree requirements and curriculum.

Examples of how the data in (2) is used to assess the rigor, breadth, and currency of degree requirements and curriculum are stated below:

The 98% employment rate as reported by Institutional Research and Testing speaks well of the program's ability to provide quality employees to industry. This trend is an indicator of rigorous and current curriculum, and appropriately associated degree requirements. Because of the Automotive Engineering Technology program's reputation for quality programs and qualified graduates, employers actively seek Ferris State University graduates to hire.

The higher than average graduation rate is an indicator of the program's ability to attract and retain quality students. When comparing post secondary opportunities, high school students are attracted to Ferris State University because of employment potential as described previously. This allows the university to impose minimum entry requirements, resulting in a more prepared student body.

The Automotive Engineering Technology program is ABET accredited; attesting to the quality, rigor, currency, and completeness of the program. To maintain ABET accreditation, the program must complete a review process every 5 years to ensure the program's adherence to rational standards.

4) Describe how the trend data in (2) is used to assess the extent to which program goals are being met.

Trend data previously described demonstrates the extent to which program goals are being met, examples are noted below:

Goal # I - Trend data shows a correlation with providing students necessary skills and knowledge to perform professional engineering duties in the automotive industry.

Goal #5 - Trend data shows a correlation with providing students with flexible options in both education, such as emphasis areas, and extracurricular activities, such as SAE, that increase their opportunities to successfully compete in the job market.

Goal #8 -Trend data shows a correlation with providing the transportation industry with qualified entry level engineering personnel.

Goal #12 - Trend data shows a correlation with university recognition and enthusiastic industry support.

Goal #13 - Trend data shows a correlation with university visibility in regards to recruiting and Curriculum offerings.

Section 3 - L. Administration Effectiveness

1) Discuss the adequacy of administrative and clerical support for the program.

The department consists of the following programs:

Automotive Service Technology
Automotive and Heavy Equipment Management

The department has 9 tenured faculty members. The AET program has no faculty assigned to it.

In addition, there is one secretary and one account clerk for the department. The secretary's duties are split between all the programs, providing clerical and accounting support for 9 faculty members, the School Director and the AET Program Coordinator.

The account clerk is responsible for operations pertaining to the service floor operation, dealing with parts inventory, customer collections, and part-time student employment scheduling and payroll.

One equipment repair technician serves the department.

To provide comparison, the chart below illustrates the responsibilities of School Directors and clerical staff for other schools within the College of Technology.

School	Director	Clerical	Faculty	Programs
Architectural	1	1/2	5	2
Automotive	**1**	**2**	**18**	**3**
Construction	1	1	11	3
Electrical/Electronics	1	1/2	7	3
HVACR	1	1	14	2
Heavy Equipment	1	1	4	2
Manufacturing Technology	1	1/2	16	3
Mechanical Design	1	1/2	12	4
Plastics and Rubber	1	1	7	4
Printing	1	1/2	7	3
Surveying Engineering	1	1/2	5	2
Welding	1	1/2	5	2

2) Are the program and/or department run in an efficient manner? Please explain.

Program requirements are constantly being evaluated by the department chair, with feedback from faculty. Every attempt is made to maximize resources and make the department work more efficiently.

As noted in the chart above, Automotive Technology is the largest department

in the College of Technology with no additional clerical or administrative staffing. With the enrollment trend, the limited number of support staff has to be addressed.

3) Are class and teaching schedules effectively and efficiently Prepared? Please comment.

All schedules are set by the School Director to follow the students check sheet so they can graduate on time. The rooms are set by the lab class and the faculty schedules are set last based on their course ability.

4) Are students able to take the courses they need in a timely manner? Please comment.

Yes, classes are scheduled to allow students the opportunity to take the courses in sequence, with additional time in the schedule for general education courses. There is also a winter start to the program as well. For those students wanting to go year around, the last semester, senior year, is offered in the summer, so students can leave campus in December, only needing the internship to graduate.

Section 4
Facilities and equipment

Section 4 - A. Instructional environment

1) **Are current classrooms, labs, and technology (both on-campus and at off-site locations) adequate? Explain.**

   Comments are based on a survey sent to faculty and the tabulated responses are included in the appendix.

   Classrooms are considered to be acceptable for instruction and or below expectations faculty.

2) **How does the condition of current facilities impact program delivery? Explain.**

   Classroom equipment varies considerably from one classroom to the next. Some classrooms are equipped with built-in projection units, two automotive classrooms are equipped with document cameras. There is also portable projection equipment available for use in rooms without permanently mounted equipment. Overall, the availability of instructional equipment is very good.

   Labs that are dedicated for a particular subject matter are reasonably well equipped and set up. One of the classrooms was created out of a storage room and is too small for a full lecture class.

3) **Describe the program's projected needs with respect to instructional facilities.**

   The Automotive program has had double digit increases in student numbers. This has caused certain courses within the program to be overfilled. The service floor is a good example of this over capacity issue.

   The facility is currently being used to its capacity and in some areas has exceeded its capacity. The Automotive Service program was granted temporary use of the storage facility adjacent to the physical plant. This is now being used for lab space by the Ford ASSET students. This helped to increase the size of the service floor by approximately 25%. This expansion coupled with changes in the requirements for a Baccalaureate degree will reduce the numbers on the service floor in the future. Future plans include increasing the level and availability of technology used by AET students in labs and replacing equipment hat is out dated with state of the industry equipment.

4) **Describe current plans for facilities improvements and indicate their status.**

Closure of the Auto Body program will allow expansion of the AET program into those facilities adding lab and classroom space. We are also contemplating the creation of a dedicated lab for AET Capstone projects and for the SAE Baja and Formula One teams.

5) **Describe how proposed changes or improvements to facilities would enhance program delivery.**

ABET accreditation will require that our seniors parfticipate in a Senior project/capstone project. Currently this is accomplished during their Internship. Having a dedicated lab would allow us to offer the opportunity for completion in house, with the added support of Faculty and Staff.

Section 4 - B. Computer Access and Availability

1) **Outside of computers in faculty and staff offices, identify the computing resources (hardware and software) that are allocated to the program.**

Computer hardware available for automotive student use in the computer lab consists of 15 computers, 1 scanner and 1 printer. The lab is in constant use, but, 1 or 2 computers are usually available at any given time. Laptop computers are available at the service counter for students to sign out. There are 24 laptops available for student use which were replaced in December of 2005. The laptops are able to use the internet through the wireless network available in the automotive building which was the first wireless building on campus.

2) **Discuss how these resources are used.**

The software, programs and on-line resources that students access using the computer lab and laptops are numerous. Automotive students are able to use hundreds of CDs of training, on-line training programs, and factory vehicle service information. Alldata is a program students can use that makes service information available on vehicles of all makes from 1982 to today. Desktop Dynamometer and Desktop Drag Strip are two programs which allow students to change design features of the vehicle or engine and test them to see the effects of their design changes. Desktop Dynamometer is an especially useful program for students to learn how changing conditions affect engine efficiency before using the real engine dynamometer and its management software in engine performance class. While using the engine dynamometer students can use software to plot torque and horsepower curves for the engine as they make changes to parameters such as air fuel mixture and engine temperature. Flow com airflow calculation software is used by students studying the effects of

design on airflow through components, this software records and plots airflow as students prove their experiments on the airflow bench. CODA engine analyzer software is available so that students may use the laptops to aid in diagnosing vehicle problems. Auto Enginuity is a laptop based scan tool software also used by students in the Automotive and AET Programs. The computers are also outfitted with software students can use for all types of projects, these include: Microsoft office suite, Java and Adobe products.

3) Discuss the adequacy of these resources and identify needed additional resources.Does an acquisition plan to address these needs currently exist? Describe the plan. Has it been included in the department or college's planning documents?

The availability of computer hardware for student use is currently adequate; increases in future enrollment may strain resources. Computer software that is currently out of date and needs to be replaced is Desktop Dynamometer, Desktop Drag Strip, and the engine management software for the engine dynamometer. The hardware of the engine dynamometer is in need of replacement, it is currently run by an outdated DOS-based program that is no longer supported. Software will need to be purchased to accompany the hardware and the equipment of a much needed new chassis dynamometer.

4) Discuss the efficacy of online services (including WebCT) available to the program.

The AET Program was approved for a new faculty member position for this year. The AET Program does not currently have an operating budget, though may be eligible to apply for one-time monies available through the University based on program needs. An operating budget for the AET Program would increase the resources available to meet the instructional needs of students. The need for additional resources will be based on program success, enrollment and areas for improvement highlighted by the program evaluation.

5) Discuss the adequacy of computer support, including the support for on-line instruction if applicable.

Online services are a beneficial boost to instruction and a versatile way to give assignments, exams and for students to access the University. The Ferris State University website and campus pipeline are valuable resources for students to schedule classes, access university services, and contact instructors. Blackboard and manufacturer online services are widely utilized in the instruction of AET students.

Blackboard is one of the most versatile tools for student instruction available today, in addition to testing and homework assignments it can be used to communicate with the students in a particular class or section. Testing and

homework submissions on Blackboard are graded and points added to by the program allowing students instant feedback on their progress, features are also included which allow instructors to see the graphs and statistics on test questions to identify potential problem questions or weak areas. Blackboard has also been a valuable tool for administering surveys to gauge student satisfaction with the program and individual course.

6) **Discuss the adequacy of computer support, including the support for on-line instruction if applicable.**

Students can get computer support from the student assistants who staff the computer labs and from SATS (Student and Administrative Technology Support) in the West Building. The University provides a complete range of computer support services, for Faculty and Staff, through the Technology Assistance Center. The Technology Assistance Center is available by phone, email and in person by visiting their office in Flite.

Section 4 - C. Other Instructional Technology

1) **Identify other types of instructional technology resources that are allocated or available to the program.**

Technical data for several Original Equipment Manufacturers (OEM) such as Honda, Volkswagen, Audi, Toyota, Ford, and General Motors are available via manual, CDROM/DVD, and web based databases. Likewise, two aftermarket data sources, ALLDATA and Mitchel are available through the Automotive Center and through FLITE.

2) **Discuss how these resources are used.**

These sources provide the students an opportunity to learn research techniques for data acquisition.

3) **Discuss the adequacy of these resources and identify needed additional resources.**

Very adequate.

4) **Does an acquisition plan to address these needs currently exist?**

N/A

5) **Describe the plan. Has it been included in the department or college's planning documents?**

N/A

6) **Discuss the impact of adequacy of other types of instructional technology resources and support of these resources on the program.**

FSU Automotive has an abundance of vehicles for instructional purposes provided by several Manufacturers. Support by the Corporations has been outstanding and we anticipate that this will continue well into the future.

Section 4 - D. Library Resources

1) **Discuss the adequacy of the print and electronic and other resources available through FLITE for the program.**

The Ferris Library for Information, Technology and Education is a multifaceted, complex organization designed to serve the needs of the students of Ferris State University, the faculty and staff and the community at large. We provide access through various channels to information necessary to the success of our students, staff and faculty.

2) **Discuss the service and instruction availability provided by the Library faculty and staff with respect to the needs of the program.**

The library has a budget that is divided among the 120 or so programs that are offered at Ferris. Books, periodicals and electronic databases are purchased both for specific programs and for the student body at large. Over the last couple of years, the Automotive Department, including the Automotive Engineering Technology Program has had a book budget of some $6,000.00. We have purchased as many books and periodicals as we can afford, along with a number of specific databases. For the College of Technology, the *Applied Science and Technology Abstracts* database most specifically provides access to periodical literature on the automobile/service industry. We also provide links to online automotive resources through our Library homepage. We continue to look for resources that will be of use to our students and faculty.

3) **Discuss the impact of the budget allocation provided by FLITE to your program. Is the budget allocation adequate? Explain.**

All told, the library provides access to almost 13,000 journals, magazines and other periodicals in various formats. We also have purchased or have database access to almost 40 journals dealing specifically with automotive engineering technology. Some of the databases we provide our students include the *Applied Science and Technology Abstracts Index* (some full-text); *Wilson SelectPlus* (full-text); *InfoTracOne* (full-text) and other general use databases.

For those articles or books to which we do not have direct access (bound periodicals, microfiche/microfilm, electronic full-text, etc.) we provide interlibrary

loan service at no charge to our students and faculty. With the improvement in technology, these articles are usually available within two days of request and often within 24 hours..

A new service that is being funded by the State of Michigan is the new MelCat database made up of participating Michigan libraries online public access catalogs. Eventually every library in Michigan will participate, but currently, there are 51 libraries participating, including Michigan State University, Wayne State University, Central Michigan University and many others. A patron may conduct their own interlibrary loan transaction through the MelCat database, and the book they request will be sent to their home library. If a Ferris student finds a book at another library, after the interlibrary loan request, the book will be sent to Ferris' library and the student will be contacted to come to the Check out Desk and pick it up. The URL for MelCat is: http://elibrary.mel.org/

The library also provides access to a number of specialized computer programs for College of Technology students. These include AutoCad and Mechanical Desktop power pack. These computers are located on the 2nd floor of FLITE. We have also added a small number of Apple Computers for those patrons who wish to use graphic intensive programs. All of the computers in the library provide access to Microsoft Office Suite to assist students in writing papers and preparing presentations

Section 5
Conclusions

Conclusions based on data analysis derived from Sections 2-4 and on the collective wisdom and judgment of the PRP. In arriving at these conclusions, the PRP should summarize the relationship of the program to each of following specific categories and any other categories it deems appropriate:

Section 5 – A. Relationship to FSU Mission

The AET Program has a fifteen program goals that align with the mission of the University and are more specific to the program and the needs of the students and industry. The mission statement refers to career-oriented, technological and professional education as the focus areas of the University. The AET Program at Ferris State University is a combination of these three focus areas creating a degree with graduates that are in demand in industry. The students begin with career-oriented and technological education as they attain the skills of an automobile technician in the first two years of the degree. AET Students in the second half of the program continue their technological education and add the elements of their education that will enhance their professional career, for example the quality certification. The program exemplifies the mission statement through the offerings to the student and our graduates' success in business and industry.

Section 5 – B. Program Visibility and Distinctiveness

The program is visible through our graduates and interns in auto related industries all over the world, student organization activities, and through information readily found on the internet. Although the program has only been in place for five years, when visiting major automotive related industries it is not uncommon to encounter many Ferris AET graduates working in the labs and testing facilities. Ferris graduates are employed in industry leaders such as Ford, Toyota, Nissan, General Motors, Detroit Diesel and AutoLIV, just to name a few. The program visibility is heightened by student projects like the SAE Formula and Baja vehicles. In the SAE formula and Baja projects students work together with Mechanical Engineering students to design and build vehicles for competition. The students must build vehicles that will meet the SAE safety standards and perform under varying conditions. The vehicles created by the students will be used to compete against the vehicles built by students at SAE Chapters at other schools.

The Ferris State University AET Program is among the findings on the first page of any Google search of automotive engineering technology programs. The AET Program has a website liked with the website for Ferris that provides students with complete, easy to navigate information on the school and the program, as well as applications for admission.

The Ferris State University Automotive Engineering Technology Program is clearly set apart from other programs by the technical experiences and emphasis area options available to students. No other program combines the hands-on technical competence in automotive technology with the higher order thinking skills of engineering

technology. The students are required to use their skills in a real world application before graduation. The students will work on the service floor at Ferris as a technician or do an internship in an independent repair facility or dealership to utilize his/her automotive skills in a real world environment. Many schools offer automotive classes, but, the true value of such classes is often not realized by the student until the keys of a malfunctioning customer vehicle are placed in his/her hands and it becomes their responsibility. Time and time again employers have sited the excellent technical competence of Ferris AET graduates as an employability trait that has made them prefer the hiring Ferris Graduates over the graduates of other schools offering Engineering Technology Degrees. Students in the AET Program also must do an internship in an auto related industry as part of their study. Students often intern at labs or testing facilities that make use of the practical aspects of both the automotive and engineering technologies included in the degree. The emphasis areas offer students an opportunity to study their area of greatest interest more in depth while increasing their knowledge in an area that will be valuable to their skill set and future employer. The combination of technical excellence and valuable areas of emphasis has placed the Ferris State University AET Program in the forefront of Automotive Engineering Technology and places AET graduates in high demand.

Section 5 – C. Program Value

Program visibility and distinctiveness: There are only two Automotive Engineering Technology programs; Mankato State and Ferris State University. Both are ABET accredited. Ferris State University's Automotive Engineering Technology program has renewed accreditation with ABET. ABET accreditation renewal was completed the year prior to the academic program review process.

Section 5 – D. Enrollment

In eleven years the program has grown from 0 to 152. The last two graduating classes have been around 40 plus with 50% from out of state, it is truly a natural leader. This enrollment growth has had little to no recruiting.

Section 5 – E. Characteristics, Quality, and Employability of Students

The value; characteristics; quality of the program can be seen in both the large amount of transfer students; 34 out-of- state transfers, along with 12 in-state transfers from community colleges for a total of 46 transfers students out of 78. With the next 2 year cycle one can see the large amount of freshmen and sophomores coming to Ferris State University for a 0-4 program; attachment (2). Also, please see attached job titles and company positions in the last two years alone; attachment (3).

Section 5 – F. Quality of Curriculum and Instruction

Adequacy of the facilities and the equipment, the junior level classes Auto 310 and Auto 320 have very good labs. The senior year Automotive labs need equipment and lab space for Auto 450, Auto 460, and Auto 480. The fuels and lubes labs need some equipment, some of which will have to be purchased.

Section 5 – G. Composition and Quality of the Faculty

The composition and the quality of the faculty can be seen in the ABET accreditation Part 1 self study book which lists all the faculties resumes that teach in the program. As can be seen most of the engineering faculty come from the manufacturing, material science and product design areas. As a result the majority of the classes in the Automotive Engineering Technology program are taught by faculty other than automotive.

OVERALL CONCLUSION

Requesting Enhancement

The AET program was started in 2001 and has grown to over 150 students with 57% from out of state or out of country. It is the national leader among Automotive Engineering Technology programs with ABET accreditation. All the students find placement in Engineering Technology positions after graduation. The AET program was started with no faculty or SNE budget. The budget has since been corrected and based off of enrollment. The majority of upper division courses come from other engineering areas in the College of Engineering Technology. The two courses that need equipment money and lab spaces are emissions and alternate fuels. The third class is fuel and lubricants, and it needs equipment. These three courses have never been funded and as a result need to be. This is why the program needs to be enhanced so the program can maintain its competitive edge.

ABET
Self-Study Report

for the

AUTOMOTIVE ENGINEERING TECHNOLOGY

Program

at

FERRIS STATE UNIVERSITY

Big Rapids, Michigan

July 1, 2009

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The information supplied in this Self-Study Report is for the confidential use of ABET and its authorized agents, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.

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Self-Study Report

Automotive Engineering Technology

Baccalaureate

Ferris State University

BACKGROUND INFORMATION

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- **Program History**

The Automotive Engineering Technology (AET) degree was first offered in 2001. The goal of the new program was to be the best Automotive Engineering Technology program in the United States. AET has aggressively pursued this goal. As a result, the program has grown to 160 enrolled students and is the fastest-growing program at Ferris and is one of the larger programs in the College of Engineering Technology (CET).

The AET program reflects several curriculum enhancements since its last TAC-ABET evaluation in 2005. Many of these changes resulted from recommendations by previous TAC-ABET evaluators, the Chemistry Department, and the AET Industry Advisory Committee. Assessment indicates these changes have positively impacted the educational outcomes.

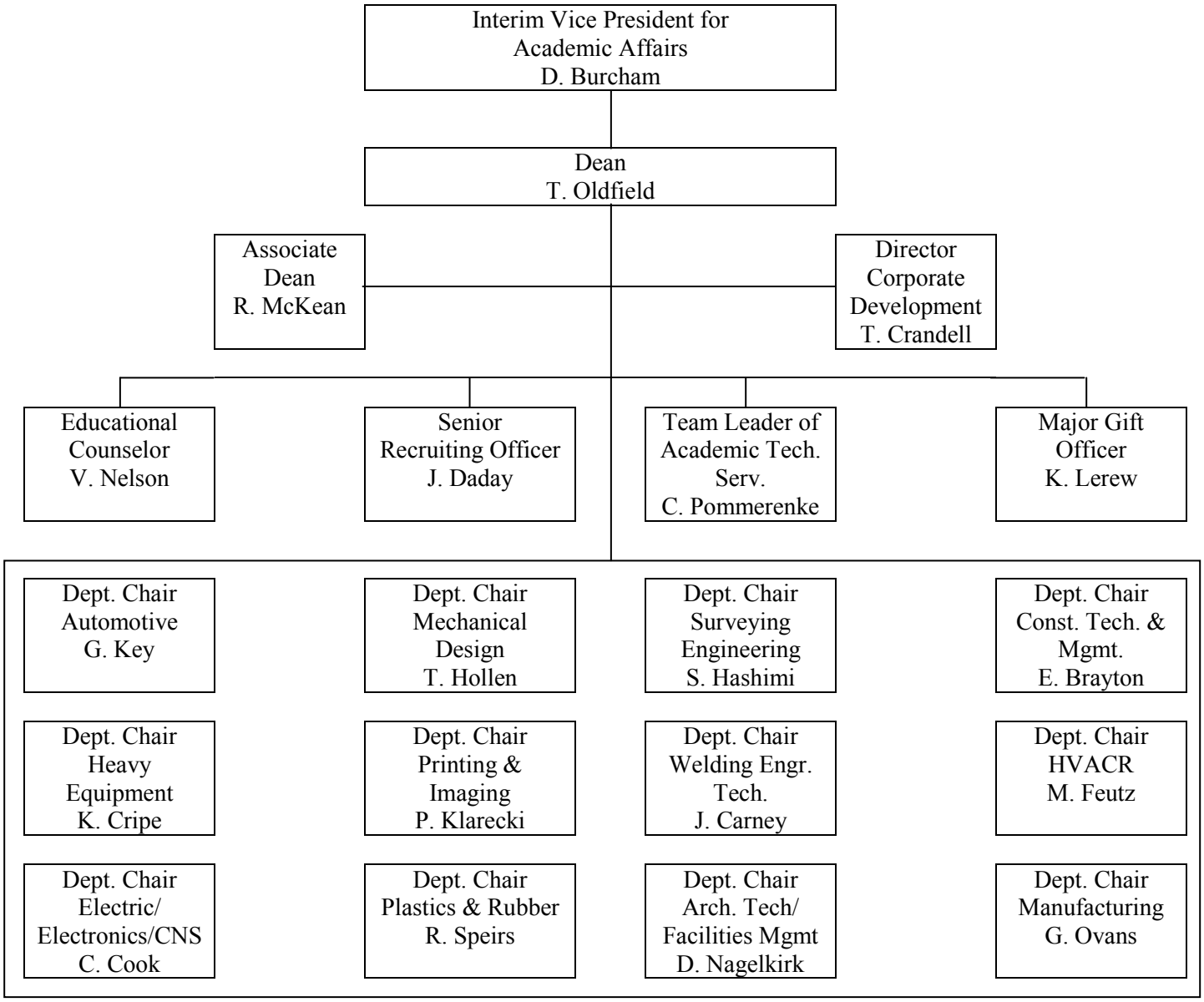
The program's academic standards rate among the highest of those programs within the CET. To help assure high success rates, AET has raised entrance requirements. The curriculum has developed to become more challenging and better directed to achieving desired learning outcomes. The AET curriculum currently consists of several cross-discipline courses that provide greater breadth of education as well as broadened teaching environments. In fact, only five of the fifteen classes taught in the junior and senior years are taught by the Automotive Department. The other ten courses are taught by supporting departments such as Mechanical Engineering, Product Design, Manufacturing, Material Science, CAD, and Quality. This means that 66% of the coursework comes from other professional engineers. It is truly the most diverse set of coursework in the University. The AET program's current history boasts the highest number of students on the Academic Dean's List within the University; the most out-of-state students; and a high number of international students. Additionally, this year four of five Tau Alpha Pi inductees were AET students. Tau Alpha Pi is the national honor society for engineering technology programs. Tau Alpha Pi membership is open to top-performing associate-degree and baccalaureate students in engineering technology programs. Only the highest four percent of an institution's total engineering technology enrollment in a given academic term may be elected members. Since the students must also be nominated by their faculty group, this is truly an honor for top students based on both academics and character.

- **Options**

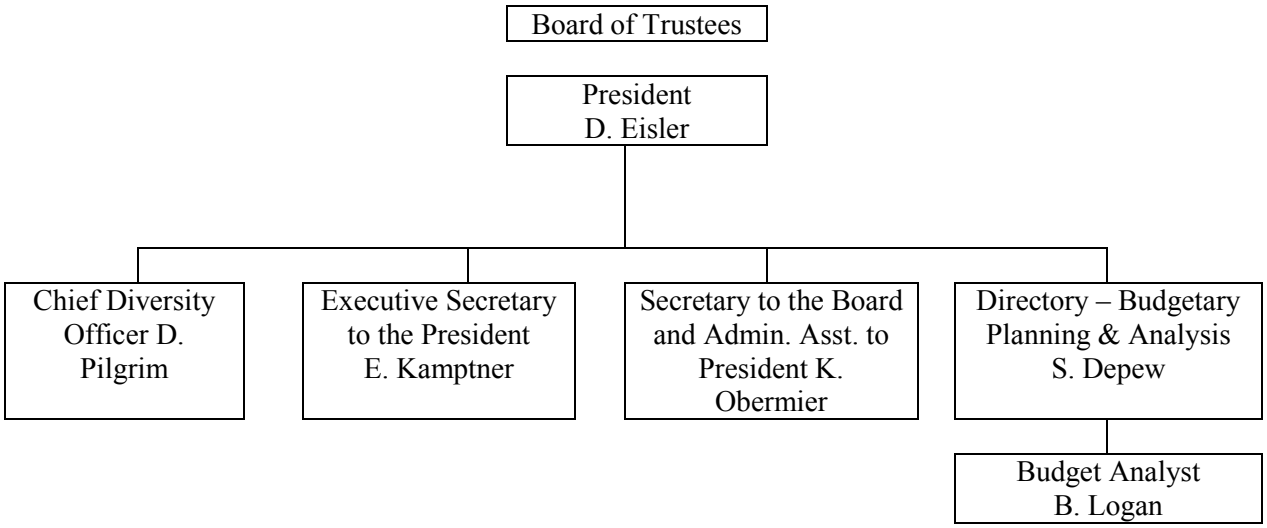
  The AET had three options when originally offered in 2001. However, two of these were determined to lack rigor and content of the third (the Manufacturing Statistical option). At the suggestion of the last TAC-ABET visiting team, the Manufacturing option courses were incorporated into the core and the options were dropped. In effect, all students currently take what was once the Manufacturing Statistical option.

- **Organizational Structure**

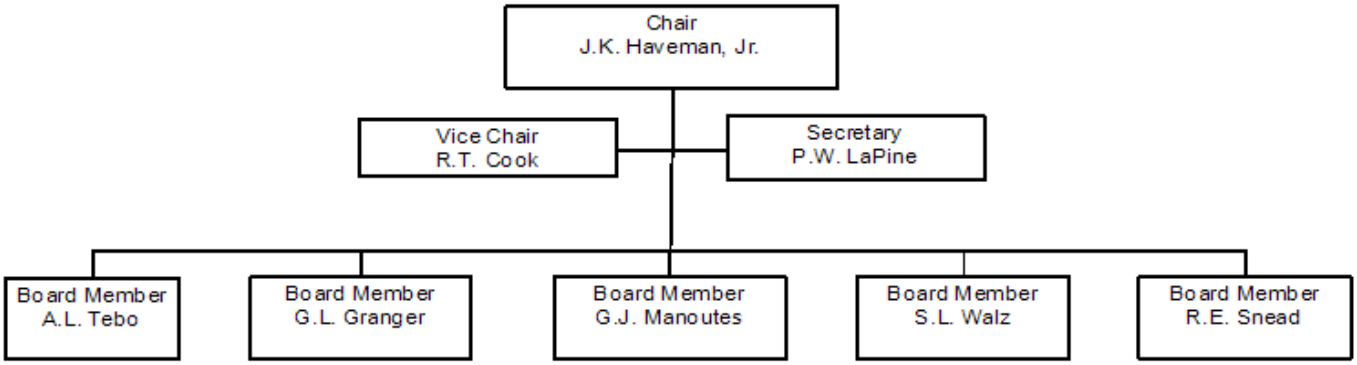
FERRIS STATE UNIVERSITY
ACADEMIC AFFAIRS DIVISION
COLLEGE OF ENGINEERING TECHNOLOGY



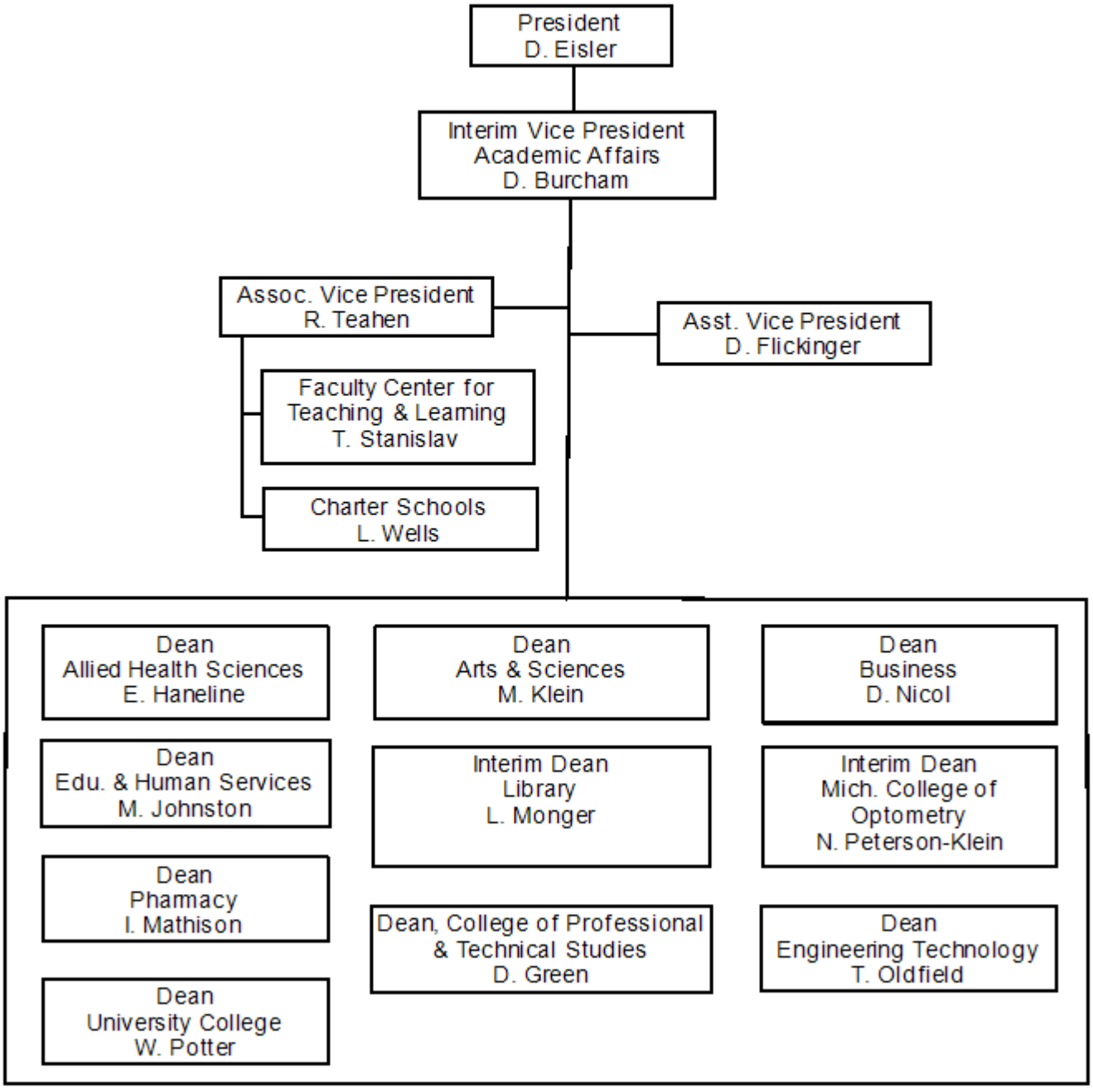
FERRIS STATE UNIVERSITY
EXECUTIVE DIVISION



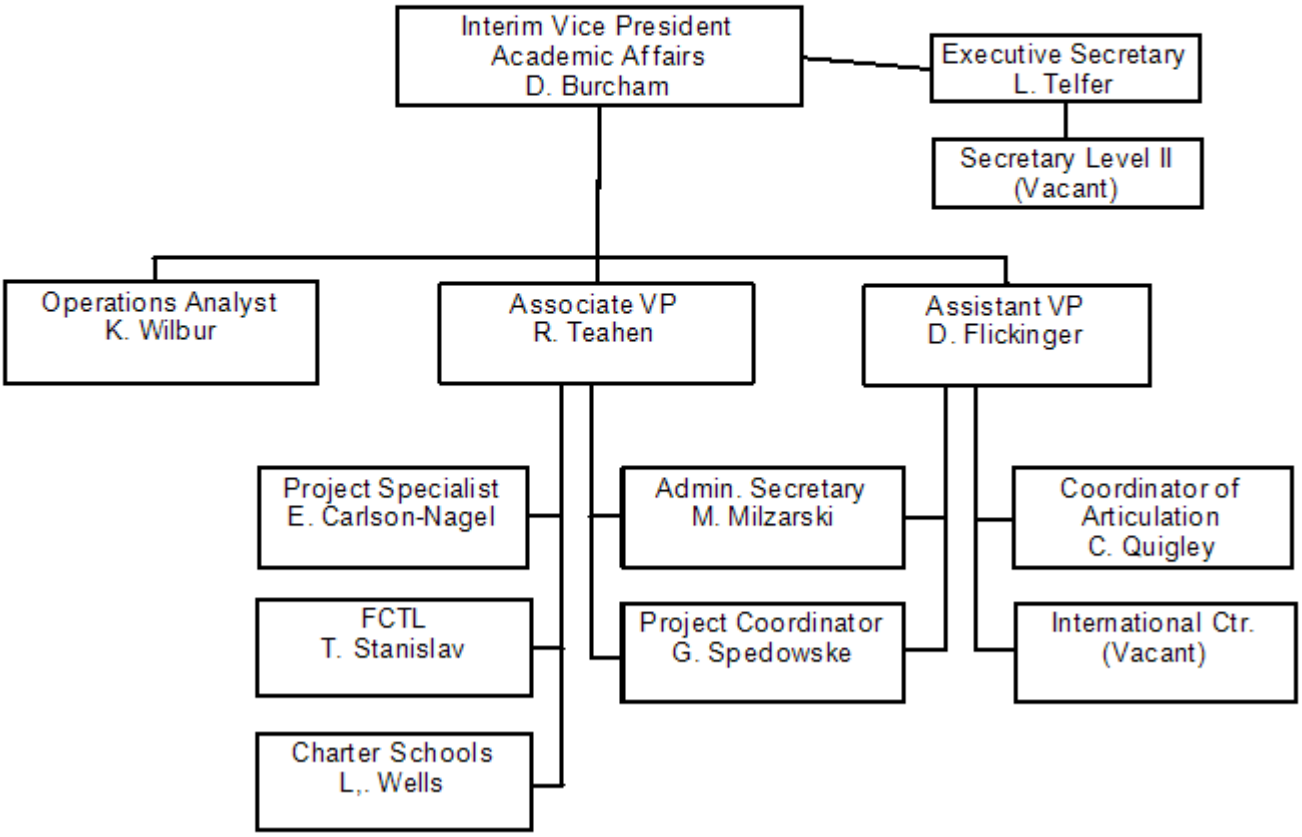
FERRIS STATE UNIVERSITY
BOARD OF TRUSTEES



FERRIS STATE UNIVERSITY
ACADEMIC AFFAIRS DIVISION



FERRIS STATE UNIVERSITY
OFFICE OF ACADEMIC AFFAIRS



- **Program Delivery Modes**

  All of the core classes in the Automotive Engineering Technology Program are taught during the day or early evening up to 9:00 p.m. on the main campus in Big Rapids, Michigan in the traditional lecture/lab setting.

  Currently, the Automotive Engineering Technology program seeking accreditation is not offered at any of the off-campus locations. However, some of the math and manufacturing courses are offered at our Grand Rapids campus.

  The Ferris-Grand Rapids campus includes the College of Professional and Technological Studies (CPTS) and the Kendall College of Art and Design. Facilities are conveniently located in downtown Grand Rapids (approximately 55 minutes from the main campus). The CPTS offers instructional and office space including computers. In addition, the CPTS houses an auditorium, banquet space, and teleconferencing facilities.

- **Deficiencies, Weaknesses or Concerns Documented in the Final Report from the Previous Evaluation and the Actions taken to Address them**

  Responses to "Program Weaknesses" as outlined in the October 2006 ABET "Final Statement:"

  1. In 2006-2007, we made many curriculum changes based on the ABET recommendations. All of the ABET recommendations were followed; classes were added and deleted as suggested/recommended by ABET. The entire Curriculum Change Proposal document is incorporated herein. The AET curriculum is the only curriculum that has two years of Statistics in it and the only one that has the Statistical Process Quality Control Certificate.

  2. For the design requirement, we had ETEC 140 and PDET 322. We have since modified and increased the academic level to make it a full-year sequence beginning with PDET 322 Modeling and Prototype Development followed by the sequential class, PDET 415 Advanced Solid Model. This enables students to have a full year in Pro-E Engineering and to complete an automotive design project in the 415 class. The full continuous year in automotive design in Pro-E results in both software and the design aspect being addressed thoroughly. The criterion was implemented and started this last year. Assessments indicate positive results from this change.

  3. Since the "Final Statement" was issued, we have made two curriculum changes. One change added MECH 212 Kinematics and Measurements and PDET 413 Fluids and Thermodynamics. Since that time, we have also sent four faculty to the University of Wisconsin Automotive Research Center for graduate courses – all of them calculus based courses to implement calculus throughout the automotive courses as well. As a result of adding calculus-based classes, MECH 212 (Kinematics of Mechanisms) and PDET 413 (Applied Fluid Mechanics and

Thermodynamics) and adding calculus course work to the automotive classes, calculus has been integrated throughout the program.

4. In reference to Criterion 4 we have implemented the Internship Review Board, which consists of four Automotive Engineering Technology faculty advisors and the department chair. They have done an outstanding job and all experiences have been increased to where they are totally appropriate and they have turned down and forced students to go to different companies where they would gain more engineering experience. See attached Internship description sheet indicating engineering assignments.

Responses to "Program Concerns" as outlined in the October 2006 ABET "Final Statement":

1. The evaluators were concerned that the dynamometer was outdated at the time of the evaluation. A new dynamometer has been purchased and is being installed in the summer of 2009. The dynamometer cost over $100,000 and the dyno cell is costing over $250,000 for a grand total of close to $400,000. That concern has been resolved as the new dynamometer is being implemented.

Responses to "Observations for Improvement" as outlined in the October 2006 ABET "Final Statement":

1. We had basically taken the input from the ABET evaluation team and eliminated our second Physics course, which was a repeat of a lot of electrical work, and we added Chemistry 103. Since that time, the Chemistry department suggested that we should increase this by one credit and go with the standard Chemistry course which is Chemistry 114. Based on the input from the Chemistry department we have done that so we've gone from no Chemistry up two levels completing a four credit, full lab Chemistry course.

BACKGROUND INFORMATION SUPPLEMENTAL DOCUMENTS ATTACHED

1. ABET, Inc. Technology Accreditation Commission Final Statement on Ferris State University, Dates of Visit: October 15-17, 2006
2. ABET letter to David Eisler of August 13, 2007
3. ABET Summary of Accreditation Actions for the 2006-07 Accreditation Cycle
4. ABET letter to Thomas Oldfield of August 13, 2007
5. Ferris State University (FSU), College of Engineering Technology, Automotive Engineering Technology (AET) Response to ABET findings.
6. FSU AET Form A "Curriculum Clean-up, Course Change Proposal Summary and Routing Form, final approval dated 02/19/09.

CRITERION 1. STUDENTS

- **Student Admissions**

  Current admission criteria for new students require all incoming freshmen students to submit ACT or SAT test scores along with official high school transcripts prior to an admission decision. Transfer students are required to submit official transcripts from all colleges attended as well as official high school transcripts and test scores, if required as prescribed by university standards, to achieve a complete academic profile. Students fulfilling both university and program entrance requirements (GPA 2.5 overall, 2.75 technical sequence, and ready for Math 116. Transfer students expecting to enter as a junior must be ready for MATH 126) will be granted admission.

- **Evaluating Student Performance**

  Evaluation of student performance is done at all the University, College, Department, Program, and course levels. All information is supported through course notebooks and is posted online in TracDat. Please see supplemental TracDat materials. Full programmatic data will be supplied electronically at the ABET site visit.

  The University has established a comprehensive outcomes assessment program. In meeting the NCA's Ten Characteristics of an Outcomes Assessment Program, the Ferris Student Outcomes Assessment Plan is based on the Ferris Statement of Mission, with provisions for faculty planning and guidance. The plan encourages the use of multiple measures, including portfolios, competency exams, capstone courses, licensure, certification, graduate surveys, employer surveys, and external advisory committee surveys in assessing student academic success. Each of these is in use within the automotive program. Results from these multiple assessments will regularly be reported through the ongoing university assessment system that utilizes TracDat as a repository.

- **Transfer Students and Transfer Courses**

  Transfer students are required to submit official transcripts from all colleges attended, as well as official high school transcripts and test scores, if required as prescribed by university standards, to achieve a complete academic profile. Students fulfilling both university and program entrance requirements will be granted admission. All students transferring into the Automotive Engineering Technology program have their existing credits evaluated. Any automotive related credits are evaluated by the Automotive Department Chair. Any technical courses are evaluated by the college academic counselor, and all general education courses are evaluated by their respective department head. Through a program change, the “2+2 option” for the AET degree was eliminated, consequently requiring that all transfer students must complete all requirements of the checksheet (see attached), regardless of which school a student transferred in from. Therefore, if a student transfers in as a freshman, sophomore, or junior, all students have to complete the entire AET program checksheet, coursework or equivalency which means that all students meet the ABET outcomes.

- **Advising and Career Guidance**

  Every undergraduate college has educational counselors to provide information on all of the academic programs in Ferris's undergraduate colleges. These counselors are located in the colleges of Allied Health Sciences, Arts and Sciences, Business, Education & Human Services, Engineering Technology and University College.

  In addition to providing academic counseling, educational counselors in the Educational and Career Counseling Center (ECCC) located in STARR 313 help students to identify and overcome obstacles to their academic success through the identification of both learning preferences and an individual's approach to the college learning experience. ECCC also offers assistance in making career choices. While finding the right career depends on several factors, two strong influences are personality and interests. Students can receive information in these areas by completing the Myers-Briggs Type Indicator and the Strong Interest Inventory through the ECCC. A licensed counselor interprets the results with the student and provides information on careers that are aligned with the individual's personality, interests, values, and skills.

  Faculty in each program area for College of Engineering Technology are assigned students to advise. Students are required to see their faculty advisor at least once per semester before registering. Students are also required to review progress and status prior to applying for graduation.

  In the AET program, as soon as a student is accepted into it, they are assigned a faculty advisor in the program. That faculty advisor stays with that student through the entire four years of the program. The faculty advisor works with the student on the program checksheet, general education graduation sheet, and graduation audit sheet. Each semester, a hold is placed on each student's account which prevents registration until they have met with their advisor to discuss and form a plan for the following semester. This ensures that the students are on track with their requirements and are on schedule to graduate on time with no surprises

- **Graduation Requirements**

  Meeting graduation requirements is ultimately the responsibility of the student. All courses on the AET checksheet must be completed successfully. Pursuant to University requirements, students are required to meet the general education requirements as outlined on the checksheet. Requirements are also posted on the University website here: http://www.ferris.edu/htmls/academics/gened/bsspec.html

  All students are audited for core courses and by general education classes. All information in Section VI comes from the institution's academic policies. These can be found online in the current schedule books. (Search for "schedule book" from the university's web site, www.ferris.edu or go directly to wwws.ferris.edu/webforstudents/sumfalbook03.htm.) Pages 23-25 include academic policies.

When candidates for graduation complete their "Graduation Application" forms, they meet with their advisors to clear for graduation. College or department personnel review the candidate's transcripts. This evaluation is done to ensure that students have completed all University, College, and program requirements for their degrees. If the student is deficient, she/he is notified that such a deficiency exists and must be made up. A final review takes place after all grades are posted.

Table 1-1. History of Admissions Standards for Freshmen Admissions for Past Five Years

Since the fall of 2004, new student enrollments for fall have more than doubled, from 74 to a Fall 2008 enrollment of 160 new students, reflecting a 54% growth rate.

Academic Year	Composite ACT		Percentile Rank in High School		Number of New Students Enrolled
	MIN.	AVG	MIN.	AVG.	
Fall 2008	14	21.25	--	--	160
Fall 2007	14	21.17	--	--	155
Fall 2006	13	21.45	--	--	97
Fall 2005	2	--	--	--	78
Fall 2004	--	--	--	--	74

Table 1-2. Enrollment Trends for Past Five Academic Years

College of Engineering Technology	2004/05	2005/06	2006/07	2007/08	2008/09
Automotive Engineering Technology (BS)	74	78	97	155	160

Table 1-3. Transfer Students for Past Five Academic Years

Academic Year	**Number of Transfer Students Enrolled**
2008	23
2007	25
2006	16
2005	10
2004	18

Table 1-4. Program Graduates

(For Past Five Years or last 25 graduates, whichever is smaller)

Numerical Identifier	Year Matriculated	Year Graduated	Prior Degree(s) if Master Student	Certification/ Licensure (If Applicable)	Initial or Current Employment/ Job Title/ Other Placement
1	F2007	2009	n/a	Quality Technology	General Motors
2	S2007	2009	n/a		General Motors
3	S2005	2009	n/a	Performance Motorsports	Rubber Enterprises
4	F2006	2009	n/a	Performance Motorsports	FIC America Corporation
5	F2005	2009	n/a	Performance Motorsports	MTU Detroit Diesel
6	S2007	2009	n/a	Quality Technology, Performance Motorsports	Bartech/Cummins, Inc.
7	S2007	2009	n/a		Westport Power Inc.
8	F2006	2008	n/a	Performance Motorsports	Aerotek
9	S2002	2008	n/a	Performance Machining	
10	F2004	2008	n/a		Defiance Testing & Engineering
11	F2004	2008	n/a	Quality Technology	Ford Motor Company TAC
12	S2006	2008	n/a	Quality Technology	
13	F2003	2008	n/a	Performance Machining, Performance Motorsports	Saleen, Inc.
14	F2004	2008	n/a	Performance Motorsports	TAC Automotive
15	F2005	2008	n/a	Performance Motorsports	Cummins
16	F2004	2008	n/a	Quality Technology, Performance Motorsports	TRW Automotive
17	F2006	2008	n/a	Quality Technology, Performance Motorsports	DY Piston
18	S2006	2008	n/a	Quality Technology, Performance Motorsports	US Environmental Protection Agency
19	F2004	2008	n/a	Performance Machining, Performance Motorsports	Katech, Inc.
20	F2006	2008	n/a	Quality Technology, Performance Motorsports	General Motors
21	F2004	2008	n/a	Quality Technology, Performance Motorsports	General Motors Climatic Wind Tunnels
22	F2003	2008	n/a	Quality Technology, Performance Motorsports, Performance Machining	AVL North America, Inc
23	F2004	2008	n/a	Performance Motorsports	GM-Performance Division
24	F2004	2008	n/a		Aerotek
25	F2004	2008	n/a	Quality Technology, Performance Motorsports, Performance Machining	Nevada Automotive Test Center

(NOTE: ABET recognizes that current information may not be available for all students)

CRITERION 1. STUDENTS SUPPLEMENTAL DOCUMENTS

1. AET Course Sequence Guide ("checksheet"), academic year 09/10
2. FSU Graduation Check Sheet for General Education Requirements
3. FSU College of Engineering Technology Application for Graduation
4. Documentation for the 25 graduates noted in Table 1-4

CRITERION 2. PROGRAM EDUCATIONAL OBJECTIVES

ABET Definition: *Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.*

- **Mission Statement**

  Ferris State University
  Ferris State University prepares students for successful careers, responsible citizenship, and lifelong learning. Through its many partnerships and its career-oriented, broad-based education, Ferris serves our rapidly changing global economy and society.
  http://www.ferris.edu/htmls/ferrisfaq/mission.htm

  College of Engineering Technology
  To prepare graduates who have met the high academic standards of our programs for current and future industrial and business needs of the state, the nation and the global market.
  http://www.ferris.edu/htmls/colleges/technolo/link_desc.cfm?LinkID=3

  Automotive Department
  To continuously define the profession by producing Automotive Technicians, Automotive Engineering Technologists, and Management graduates whose knowledge and skills are globally recognized.
  http://www.ferris.edu/htmls/colleges/technolo/department_template.cfm?DepartmentID=2

  Automotive Engineering Technology
  To continuously define the profession by producing Automotive Engineering Technologist graduates whose knowledge, skills and attitudes are globally recognized.

- **Program Educational Objectives**

Objective	Frequency	Evaluation
1. Employment in a discipline appropriate to the BS AET degree.	Annual	Graduate Exit Survey Alumni Survey Advisor Committee Input Academic Program Review
2. Achieve recognition as a valued employee through varied forms of promotion or merit.	Annual	Advisor Committee Input Alumni Survey Employer Survey
3. Demonstrate high standard of ethical and social values.	Annual	Advisor Committee Input Alumni Survey Employer Survey
4. Ability and desire to continue education through varied means including advanced degrees.	Annual	Alumni Survey Advisor Committee Input

Program Educational Objectives are documented in TracDat.

- **Consistency of the Program Educational Objectives with the Mission of the Institution**

  The AET Program has fifteen program goals that align with the mission of the University and are more specific to the program and the needs of the students and industry. The mission statement refers to career-oriented, technological and professional education as the focus areas of the University. The AET Program at Ferris State University is comprised of a combination of course work creating a degree with graduates that are in demand by industry. The program exemplifies the mission statement through the offerings to the student and our graduates' success in business and industry. The most recent example of the national leadership of the program was in September (06), The National Product Quality Manager of one of the top three auto manufacturers in the world made a special visit to Ferris to meet with a representative of the AET Program to discuss many opportunities in the company that Ferris AET graduates would be in demand to fill.

  The program is visible through our graduates and interns in auto-related industries all over the world, student organization activities, and through information readily found on the Internet. Although the program has only been in place for nine years, when visiting major automotive related industries, it is not uncommon to encounter many Ferris AET graduates working in the labs and testing facilities. Ferris graduates are employed in industry leaders such as Ford, Toyota, Nissan, General Motors, Detroit Diesel and AutoLIV, just to name a few. The program visibility is heightened by student projects like the SAE Formula and Baja vehicles. In the SAE formula and Baja projects students work together with Mechanical Engineering students to design and build vehicles for competition. The students must build vehicles that will meet the SAE safety standards and perform under varying conditions. The vehicles created by the students will be used to compete against the vehicles built by students at SAE Chapters at other schools. About 25 students are involved in the SAE Formula group and approximately 25 students in the SAE Baja. This year we will be starting a new SAE Formula Hybrid team and we will be one of 40 universities in the world that are involved with this new technology.

  The Ferris State University AET Program is among the findings on the first page of any Google search of automotive engineering technology programs. The AET Program has a website linked with the website for Ferris that provides students with complete, easy-to- navigate information on the university and the program, as well as applications for admission.

  The Ferris State University Automotive Engineering Technology Program is clearly set apart from other programs by the technical experiences available to students. No other program combines technical competence in automotive technology with the higher-order thinking skills of engineering technology. The students are required to use their skills in a real-world application before graduation. Time and time again employers have cited the excellent technical competence of Ferris AET graduates as an employability trait that has made them prefer the hiring of Ferris graduates over the graduates of other schools offering Engineering Technology Degrees. Students in the AET Program also must do an internship in an auto- related industry as part of their

study. Students often intern at labs or testing facilities that make use of the practical aspects of the automotive engineering technologies included in the degree. The internship offers students an opportunity to study their area of greatest interest more in depth while increasing their knowledge in an area that will be valuable to their skill set and future employer. The technical excellence emphasis has placed the Ferris State University AET Program in the forefront of Automotive Engineering Technology and places AET graduates in high demand.

- **Program Constituencies**

  Program constituencies are comprised of five major areas: Student body, the faculty, the industrial Advisory Board, industry employers, and alumni. Each is subtitled under "Students/Individuals Enrolled in the Automotive Engineering Technology Baccalaureate Program." Faculty tenure or tenure-track professors who instruct students in the department program are listed. The industrial Advisory Board is comprised of individuals representing various facets of the automotive industry who donate their time and provide input/feedback concerning the quality of the department and the program. Members consists of individual employers, individuals employed in industry, and some are also alumni of the Automotive Department that are now working in the automotive industry. The Advisory Board allows us to get immediate feedback on the curriculum. Alumni who have achieved the program objectives and have obtained the Automotive Engineering Technology degree provide feedback to the department for program curriculum changes. Last is the ABET evaluation process and the team members that come in and provide input. All of these different constituents provide input for curriculum changes.

- **Process for Establishing Program Educational Objectives**

  This is done programmatically with faculty and all of the different constituencies providing input. Additionally, objectives are further developed using the ABET review process. Each program also goes through the rigorous process of Academic Program Review every five years. This is documented in the Continuous Improvement section in Criterion 4, labeled section 1-5 with appendices. That report is available in the TracDat system and will be available for the site-visit team on site.

- **Achievement of Program Educational Objectives**

  We use a number of different processes to evaluate educational objectives. Basically the Program Review process of assessment uses student and employer surveys, advisory board surveys and alumni surveys to achieve those educational objectives and evaluate the data. The data is supplied in the Continuous Improvement section under Criterion 4. Each educational course will have a complete notebook with all lecture/lab outcome materials in them along with the student work to evaluate the process. And again, the program review document is embedded in this particular document that is part of a five year review cycle.

CRITERION 3. PROGRAM OUTCOMES

ABET definition: *Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.*

- **Process for Establishing and Revising Program Outcomes**

  This is done programmatically with faculty and all of the different constituencies providing input. Additionally, objectives are further developed using the ABET review process. Each program also goes through the rigorous process of Academic Program Review every five years. This is documented in the Continuous Improvement section in Criterion 4, labeled section 1-5 with appendices.

- **Program Outcomes**

  A. A mastery of automotive technology as it relates to their program.
  B. An ability to apply current knowledge and adapt to emerging applications of mathematics, science, engineering and technology.
  C. An ability to conduct, analyze and interpret experiments and apply experimental results to improve processes.
  D. An ability to apply creativity in the design of systems, components or processes appropriate to program objectives.
  E. An ability to function effectively on teams.
  F. An ability to identify, analyze and solve technical problems.
  G. An ability to communicate effectively.
  H. Recognition of the need for, and an ability to engage in lifelong learning.
  I. An ability to understand professional, ethical and social responsibilities.
  J. A respect for diversity and knowledge of contemporary professional, societal and global issues.
  K. A commitment to quality, timeliness, and continuous improvement.

- **Relationship of Program Outcomes to Program Educational Objectives**

	TAC/ABET - Outcome Criteria										
Program Educational Objectives	a	b	c	d	e	f	g	h	i	j	k
1. Employment in a discipline appropriate to the BS AET degree.	x	x	x	x	x	x	x	x	x	x	x
2. Achieve recognition as a valued employee through varied forms of promotion or merit.	x	x	x	x	x	x	x	x	x	x	x
3. Demonstrate high standard of ethical and social values.					x				x	x	x
4. Ability and desire to continue education through varied means including advanced degrees.	x	x	x	x	x	x	x	x	x	x	x

The detailed relational database is TracDat. All relationships between objectives, outcomes and courses can be viewed electronically in TracDat at the ABET site visit.

- **Relationship of Courses in the Curriculum to the Program Outcomes**

  Please see document entitled "Program Outcomes: Course Contribution and Assessment" at the end of Criterion 3.

- **Documentation**

  One room will be set aside with all the individual course notebooks which will display all materials, i.e. course syllabi, course outline, lecture notes, lab sheets, homework assignments, sample student work, etc.

- **Achievement of Program Outcomes**

  Achievement will be produced in the form of the assessment used in both TracDat and Ferris Connect. This will be displayed both electronically and in hard copy. All outcomes will be displayed in each course notebook. For all outcomes, a summary list and a sample of TracDat data are supplied on the next couple of pages.

CRITERION 3. SUPPLEMENTAL DOCUMENTS ATTACHED

1. Program Outcomes: Course Contribution and Assessment

CRITERION 4. CONTINUOUS IMPROVEMENT

- **Assessment of Program Educational Objectives**

The assessment of the Educational Objective takes place within the Continuous Improvement plan and is shown below. The instruments used to assess the effectiveness of the objectives include employer surveys, alumni surveys, feedback through evaluations from intern sites and advisory committee input. The employer and alumni surveys are done on a biannual basis and the intern and advisory input are done on an annual basis. This input is combined with the assessment information gathered from the educational process and other outside input from academic offices, ABET and faculty. The assessment committee takes this information and makes a recommendation to the department for changes in the Education Objectives. The department meets on an annual basis to determine if the Educational Objectives need to be changed.

Evaluation Instruments

Evaluation Instrument	Status	Frequency	Evaluators
1. Course Performance Records (Grades)	In Place	Each semester	Instructor
2. Projects, Presentations, and Portfolios	In Place	Determined by course	Faculty Committee
3. Industrial Internship Experience (Auto 493 Supervisor Evaluation)	In Place	Minimum one-ten week period over educational experience	Faculty, Employer
4. Auto 493 – Project and Report Evaluation by faculty	In Place	Senior year	Faculty, Advisors, Industry, Peers, etc.
5. Faculty Input	In Place	Regular meetings, Department/College/University Curriculum Committee, etc.	Faculty
6. Student Assessment of Instruction	In Place	Each Semester. Two course sections assessed for each faculty by all students in those sections.	Administration, Faculty
7. Graduate Survey	In Place	After program requirements are met.	Faculty, Advisors
8. Alumni Survey	In Place	Annual	Faculty, Others
9. Employer Survey	In Place	Five Years	Faculty, Others
10. Advisor Committee Input	In Place	One Year	Faculty
11. Academic Program Review	In Place	Five Years	Faculty, Administration
12. Administrative Program Review	In Place	One Year	Administration
13. Post Tenure Faculty Review	In Place	Five Years	Administration
14. ABET	2006/2007	Six Years	Industry

The Continuous Improvement Plan requires the gathering of information from several internal and external sources.

- Course performance records, student portfolio, industrial internship, and projects are all measures of course performance and readiness. The internships enable external input from industry.
- Faculty and student inputs provide course feedback and suggestions.
- Faculty and course quality is monitored and in many cases supported through student assessment of instruction and post tenure reviews.
- Program and university perceptions are provided through graduate surveys.
- Career success and direction as well as continued educational data are provided through alumni surveys.
- Readiness and success of graduates are provided through employer surveys.
- Program level viability is assessed through Academic and Administrative Program Reviews
- Industrial Advisor Committee input provides regular assessment and direction for the program.

To enable sound program improvement, data will be compiled and reviewed annually by faculty, advisors, and administration (as necessary).

The program strives to produce qualified graduates who are technically competent and are able to become leaders in the automotive industry. Our graduates will work in this industry understanding their responsibility to maintain high ethical standards and their additional responsibility to their profession through involvement with professional organizations that promote the automotive field.

Program quality is enhanced in a number of ways:

- Active participation of an industrial advisory committee. The AET industrial advisory committee meets formally on campus one day per year. An hour is set aside for the group to meet with students in a relatively open and safe environment. Student representatives are invited to eat lunch with faculty and advisors. A lengthy afternoon meeting is conducted between faculty and advisors to discuss student feedback, curricular issues and other topics of importance.

- Student surveys are conducted each semester to obtain feed back on course quality.

- An academic program review is conducted every five years to analyze the effectiveness, quality and importance of each program. An in-depth study is also prepared for the review (similar to that required for TAC-ABET). This was done in the 2005-2006 school year and a copy will be available during the visit.

- Faculty attendance at professional development activities. This promotes maintaining technical currency, enhancing teaching related skills, and the exchange of knowledge with others in the technical and teaching professions.

- There are two active student organizations within the department. Student chapters of SAE Baja and SAE Hybrid Formula provide a range of professional activities and

benefits for students. These are student-run organizations. A faculty member serves as an advisor for each.

- In addition to normal testing, student assessment is performed through senior projects and internships. Each intern is visited on site by faculty. This provides opportunity to interface with student employers and provides a better assessment of student performance.

- **Evaluation of Program Educational Objectives**

  Input from the surveys, adviser group, program faculty, student, alumni and employer surveys are all used to assess and direct the program. Direction is also guided by TAC-ABET and Ferris parameters. Continuous improvement is actualized through change in the degree program and its curriculum. Evidence of this is provided by the curriculum change proposal summary and routing form from the College of Engineering Technology proposal titled Automotive Engineering Technology minor curriculum cleanup and course changes.

  The internal peer review process conducted through the Academic Senate is the Academic Program Review. The review includes evaluation of how well each program is meeting both educational objectives and program outcomes. The University Academic Program Review Committee provides recommendations to the university for each program reviewed. The options include: 1) continue the program with enhancement, 2) continue 3) continue with monitoring 4) re-direction or 5) closure. The AET program was reviewed in the 2006-07 cycle. The recommendation was to 'continue program with enhancements'.

- **Assessment of Program Outcomes**

  The university started assessments in the early 1990's. The Academic Program Review Committee over the past number of years has put together a very comprehensive assessment process which includes all parts of the campus.

  Assessment of program outcomes is done programmatically with faculty and all of the different constituencies providing input. Further, those objectives are developed using input from the ABET review process. The program then goes through the rigorous process of Academic Program Review every five years. This process is documented in the Continuous Improvement section in Criterion 4, labeled section 1-5 with appendices.

  This timeline is done course by course, year by year, by individual faculty through the computer database system known as TracDat. All documentation of assessment and evaluation will be found in TracDat or Ferris Connect and is available for review to the ABET team during their visit.

- **Evaluation of Program Outcomes**

  Evaluation of program outcomes and objectives is provided by all constituents. The input comes from the surveys, adviser group, program faculty, student, alumni and employer surveys are all used to direct the program. This includes the input from ABET and Ferris parameters. The evidence of the continuous improvement is the actual change in the degree and courses within the degree. This can be seen with the proposal

summary and routing form from the College of Engineering Technology proposal titled Automotive Engineering Technology minor curriculum cleanup and course changes. This clearly indicates the amount of direction the university and program at Ferris State University is willing to do to accomplish their objectives and outcomes.

Outcomes a) Demonstrate an appropriate mastery of the knowledge, techniques, skills and modern tools of their discipline.

Internship Evaluation:
Internship supervisor will evaluate the quality of work performed on the job.

Reviews of Project:
Faculty supervisor will evaluate internship project during internship

Data Analysis:
The faculty will do a performance appraisal using selected questions from exams.

Project/Model/Invention:
Internship supervisor will evaluate the technical merits of the project.

Outcomes b) Apply current knowledge and adapt to emerging applications in mathematics, science, engineering and technology.

Observations (e.g. Clinical or Field):
Internship coordinator will evaluate applications during personal visit to intern.

Observations (e.g. Clinical or Field):
Internship supervisor will evaluate applications during course of working at the company.

Survey – Employer:
Intern sites will evaluate application of knowledge.

Outcomes c) Conduct, analyze and interpret experiments and apply experimental results to improve processes.

External review (e.g. employer or expert):
Intership supervisor will evaluate projects for technical merit.

Juried Reviews of Project:
Faculty will rate intern projects for experimental results applied to improve processes.

Data Analysis:
Faculty will verify, through the use of check points in the lab, that the student is able to apply experimental results in the laboratory.

Outcomes d) Apply creativity in the design of systems, components or processes appropriate to program objectives.

Juried Reviews of Project:
Internship supervisor will judge projects on creativity.

Juried Reviews of Project:
Faculty will rate projects on creativity.

Outcomes e) Function effectively in teams.

Presentation (Oral):
Faculty or internship coordinator will rate interns projects for apparent division of work on the project.

Case Studies/Problem-based Assignments:
Check points will be given for team completion the service in lab.

Outcomes f) Identify, analyze and solve technical problems.

Internship Evaluation:
The immediate supervisor will rate the intern on technical solving ability.

Data Analysis:
Selected test problems will be used on each exam to demonstrate competency.

Case Studies/Problem-based Assignments:
Selected problems will be taken from multiple homework assignments.

Outcomes g) Communicate effectively.

Presentation(Oral):
Faculty will observe and rate presentation of intern project.

Presentation (Oral):
Faculty and intern supervisor will rate communication skills during intern project presentations.

Outcomes h) Recognize the need for and possess the ability to pursue lifelong learning.

Survey - Alumni (after one year):
Perform a survey to determine if graduates have attended any workshops, training, or have taken additional courses toward an advanced degree.

Survey- Employer:
Determine if employer has provided training, workshops or tuition reimbursement for employees.

Survey- Alumni (after one year):
Perform a survey after 5 years to determine if graduates have attended any workshops, training, or have taken additional courses toward an advanced degree or have received an advanced degree.

Survey- Advisory Board:
Members of the advisory board, who have hired graduates, will be surveyed for the number of training/learning activities in which the graduate has participated.

Outcomes i) Understand professional, ethical and societal responsibilities.

Survey – Students:
Survey students to determine if they feel they have adequate courses to know their responsibilities.

Survey- Employer:
Survey employers to determine if they feel graduates perform in a professional and ethical manner.

Internship Evaluation:
Intern employer will rate intern on understanding these responsibilities.

Outcomes j) Recognize contemporary professional, societal and global issues and be aware of and respect diversity.

Survey – Employer:
Survey employers to determine if they feel graduates have an appreciation for professional, societal and global issues and respect diversity.

Survey- Alumni after one year (he graduate will rate their awareness of these issues.):

Survey- Advisory Board:
The advisory board members, who have hired graduates, will rate them on their awareness of these issues.

Outcomes k) Have a commitment to quality, timeliness and continuous improvement.

Survey – Employer:
Survey employers to determine if graduates are committed to quality and continuous improvement in their work.

Survey- Graduate (Current Year):
Survey graduates to determine if they feel they understand having a commitment to quality, timeliness and continuous improvement.

- **Continuous Improvement of the Program**

  Regular internal and external assessments are performed. Graduate, industry, accreditation, faculty and student input are used to create department and program plans for improvement. These are forwarded to College administration and then made a part of the College submission to University Academic Affairs and the President's Office. Planning documents are a major determination for funding decisions.

  Continuous improvement is accomplished by accepting input from all of the feedback activities and evaluating changes in the program. Departmental groups deal with making necessary curricular changes as feedback dictates: program subcommittee, department curriculum committee, program faculty and department chair. Generally, the

curriculum committee, made up of members of the department faculty and the department chair, handles issues of curriculum. Faculty in regularly scheduled faculty meetings normally handles professional issues. The chair of the department typically handles issues that need interpretation and near term responses.

An example of the assessment resulting in program improvement is the purchase and installation of a new dynamometer for the AET lab. This was a direct result of assessment and specific enhancement recommendations presented by the University Academic Program Review Committee. This very substantial investment indicates the commitment of Ferris State University to support AET's educational objectives and program outcomes.

The intern should be given meaningful, challenging work assignments in engineering technology. The assignments should provide both a learning experience for the student and meaningful work that needs to be done at the site. As much as possible, the intern should have the opportunity to observe and participate in every aspect of engineering technology. Intern should engage in developing, manufacturing and testing self-propelled ground vehicles and their systems. This includes vehicular systems technology, design and development testing, instrument calibration, test equipment operations and maintenance, and report preparation.

The internship packet spells out the requirements of all the constituents. These requirements have been implemented in the past. However, to guarantee that all students follow the procedures and requirements, we have implemented an AET Internship Review Board. This Board consists of four AET Faculty/Advisors and the Department Chair who:

A) Approve the students' Proposal for Internship.
B) Approve the intern's Proposal for Capstone Project.
C) Assign a Faculty Internship monitor and approve the employer mentor.
D) Review the reports of the Interns.
E) Evaluate the effectiveness of the Intern's project.
F) Perform a final assessment of the Intern's overall performance.

Analysis

A) Curriculum

1. The curriculum reflects the knowledge and skill sets required for entry level engineering technology positions.	4.33
2. The courses are current and relevant.	4.11
3. The curriculum is concentrated in appropriate subjects.	3.89
4. The curriculum is routinely reviewed and revised when needed.	3.88
5. Advisory committee input is an integral component of curriculum development.	4.50
6. The curriculum allows the student to select	4.33

specialization.		
7. The emphasis areas are indicative of industry trends and needs.		3.78
8. The Auto Service Technology curriculum is a crucial Component of the AET curriculum.		4.11
9. AET graduates are well prepared for industry employment.		4.22
10. The Service Floor experience is a valuable component of the AET curriculum.		3.56
11. The Automotive Department should pursue ABET accreditation.		4.89
12. The curriculum should expand into additional areas:		4.25
Noise, Vibration & Harshness	9	
Electric & Hybrid vehicles	9	
Supplemental Restraints & Impact Abatement	1	
All	0	
None	0	
Other	3	
AVERAGE		**4.17**

B) Outcomes

1. The program outcomes are aligned with preparing the student for entry level engineering technology positions.	4.00
2. The program outcomes are current and relevant to the industry.	4.11
3. The outcomes are routinely reviewed and revised when needed.	3.75
4. The outcomes ensure the comprehensive development of the student: knowledge, abilities, work ethic, and communication skills.	3.89
5. The program outcomes encourage students to excel.	4.11
6. ASE Certification is required for employment.	3.22
7. ASE Certification should be required for graduation.	3.67
8. Select the ASE Certification Areas *most* important on the job:	
9. Select the ASE Certification Areas *least* important on the job:	
AVERAGE	**3.82**

C) Facilities

1. The facilities are well organized and utilized.	3.75
2. The facility reflects the quality of the program.	3.50
3. The AET program should have designated classroom and labs.	4.25
4. Lab facilities are conducive to studies required by the AET	3.50
5. Additional lab space is needed.	4.38
6. Enhancement of the facility would benefit enrollment.	4.38
AVERAGE	**3.96**

D) Equipment

1. Equipment is modern and reflects industry standards.	3.11
2. The equipment is adequate for instructional purposes.	3.56
3. Additional equipment is needed for specific classes.	4.38
AVERAGE	**3.68**

E) Graduates

1. Technical knowledge	3.56
2. Mechanical skill level	3.67
3. Task organizational practices	3.33
4. Application of efficient work habits	3.67
5. Ability to learn new procedures	3.56
6. Cooperation and relationships with co-workers	3.89
7. Cooperation and relationships with supervisors	4.00
8. Demonstrates effective leadership qualities	3.78
9. Level of confidence to complete tasks	3.78
10. Ability to diagnose unanticipated problems	3.67
11. Ability to accurately perform repairs	3.89
12. Interest in developing technical knowledge	4.00
13. Verbal communication skill level	3.78
14. Written communication skill level	3.67
15. Ability to interact with customers	3.78
16. Exercises safe work practices	3.67
17. Appearance and neatness	3.78
18. Demonstrates ethical work practices	4.00
AVERAGE	**3.76**

F) Advisory Committee

1. The Advisory Committee performs a valuable function.	4.75
2. Input provided by the Advisory Committee is promptly acted upon.	3.88
3. The Advisory Committee should meet more often.	4.00
4. How often?	
5. More members are needed on the committee.	4.75
6. The Departments report to the Committee is comprehensive and informative.	4.13
AVERAGE	**4.30**

Summary

AREA	**SCORE***	
A. Curriculum	4.17	
B. Outcomes	3.82	
C. Facilities		3.96
D. Equipment	3.68	
E. Graduates	3.76*	
F. Advisory Committee	4.30	

* Items A – D & F were scored on a 5.0 scale
Item E was scored on a 4.0 scale

With an overall raw score of 4.34, the Advisory Committee scored the program as good.

The numerical score was low for the Outcomes section due to the inclusion of a question dealing with ASE certification being required for employment. This question was implemented for data gathering and not as an assessment tool.

This is a summary of all of the curriculum changes to-date:

As stated previously in Criteria 3, the Automotive Engineering Technology Bachelor of Science degree program has evolved continuously since its inception in 2000. Curriculum development and modification is implemented through procedures as determined by the University, College of Engineering Technology, the department and the program. Changes are implemented based on feedback from program constituents, including alumni, advisory board, employers, and the ABET evaluation process. Below is a table indicating curriculum changes to the Automotive Engineering Technology program since 2000.

Year	Change Proposal Summary and Reasoning
2000	In 2000, we designed a degree called Automotive Engineering Technology based on Ferris State University's research, Employer Survey's, Advisory Committee input and industry needs. The degree was developed to be an Engineering Technology degree. We had a management degree in the past but all indicators were that students and industry needed an Engineering Technology side of the industry in which testing was the major emphasis. We started the program with 37 students and the next year immediately went to 50. From there, enrollment has grown to 160. It has been the most successful degree at the University.
2004	We made some curriculum changes in 2003 and 2004 to increase the math as well physics. We made physics an entire year with Physics I and II. We also dropped the lower level math class. These changes increased the overall level of the math and science within the program.
2005	In 2005 we wanted to look at accreditation and we evaluated the program ourselves according to the ABET accreditation standards and found that we were only a course or two short so we decided to make those changes and proceed with ABET accreditation. Those changes in summary are: We added a new fuels and lubricants lecture/lab class, we closed a couple of classes, and added calculus to the program.
2006-2007	In 2006-2007, we made many curriculum changes based off the ABET recommendations. All of the ABET recommendations were followed, classes were added and deleted as suggested/recommended by ABET. That entire Curriculum Change Proposal document is posted herein. Also within this program change, the 2+2 option for the AET degree was eliminated consequently requiring that all transfer students must complete all requirements of the checksheet, no matter which school a student transferred in from. Therefore, over the last two years, all students including Ferris students who come in as 0+4 students as well as all transfer students have completed the four course sequence of statistical and probability. The AET curriculum is the only curriculum that has two years of Statistics in it and the only one that has the Statistical Process Quality Control Certificate.
2008-2009	In 2008-2009, we made additional curriculum changes to strengthen the design portion of the program, which is a recommendation of ABET Automotive Engineering Technology accreditation. We now have a full year of advanced pro-E engineering and we have also upgraded the chemistry requirement from CHEM 103 to CHEM 114.

CRITERION 4. SUPPLEMENTAL DOCUMENTS ATTACHED

1. AET Assessment Model flowchart
2. Summary sheet of all AET curriculum changes to date
3. Academic Affairs "Assessment at Ferris State University" documents, including assessment calendar and Yearly Administrative Reviews
4. Academic Senate "Academic Program Review at FSU" documents
5. FSU AET Academic Program Review Committee Report September 22, 2006

CRITERION 5. CURRICULUM

- **Program Curriculum**

  Automotive Engineering Technology prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing, and testing self-propelled ground vehicles and their systems. The program includes instruction in vehicular system technology, design and development testing, prototype and operational testing, inspection and maintenance procedures, instrument calibration, test equipment operation and maintenance, and report preparation. Please reference the second paragraph in our FSU AET brochure, which follows at the end of this section.

  The Automotive Engineering Technology program was developed from the Federal CIP 15.0803 Automotive Engineering Technology/Technician number which defines the academic program. From that point, we developed our educational objectives, our educational outcomes and placement into the testing side of engineering.

  The minimum credit hours for this program are 132 hours, including internship. Please reference the AET curriculum checksheet for academic year 2009/10, attached at the end of this section. For examples of how capstones are used to develop student competence in technical and non-technical skills in problem solving and how cooperative education is used to satisfy curricular requirements, please refer to the AET Internship packet, found at the end of this section, for complete details. The intern should be given meaningful, challenging work assignments in engineering technology. The assignments should provide both a learning experience for the student and meaningful work that needs to be done at the site. As much as possible, the intern should have the opportunity to observe and participate in every aspect of engineering technology. Intern should engage in developing, manufacturing and testing self-propelled ground vehicles and their systems. This includes vehicular systems technology, design and development testing, instrument calibration, test equipment operations and maintenance, and report preparation.

  The AET program did implement an AET Internship Review Board that consists of four AET faculty/advisors and the department chair. The board reviews and approves student proposals for internship, approves student proposals for capstone projects, assigns a faculty member to monitor, approves the employer mentor, reviews reports from the monitor, evaluates the effectiveness of each intern's project, and performs a final assessment of the intern's overall performance.

  For a demonstration of adequate time and attention given to each curricular component, please refer to table D-2.

- **Prerequisite Flow Chart**

  Please refer to the AET curriculum checksheet for prerequisites necessary for each course.

- **Course Syllabi**

  Please see attached in Appendix A.

Table 5-1 Curriculum

Automotive Engineering Technology

Year; Semester or Quarter	Course (Department, Number, Title)	Communi-cations	Math & Sciences	Technical Content	Social Sciences & Humanities	Other
1st, Fall	Auto 111 Manual Transmission & Drivelines			4		
1st, Fall	Auto 112 Automotive Brake Systems			4		
1st, Fall	Auto 113 Automotive Electricity & Electronics			4		
1st, Fall	Engl 150 English 1	3				
1st, Fall	FSUS 100 Ferris State University Seminar					1
1st, Spring	Auto 114 Automotive Engines			4		
1st, Spring	Auto 115 Suspension, Steering, Alignment Services			4		
1st, Spring	Auto 117 Electronic Fuel MNGT Systems			4		
1st, Spring	Math 116 Inter. Algebra & Num. Trigonometry		4			
2nd, Fall	Auto 213 Chassis Electrical/Electronics			4		
2nd, Fall	Matl 240 Introduction to Material Science			4		
2nd, Fall	Engl 250 English 2	3				
2nd, Fall	CHEM 114 Intro to General Chemistry		4			
2nd, Spring	Auto 200 Service Area			6		
2nd, Spring	Phys 211 Introductory Physics		4			
2nd, Spring	Cultural Enrichment Elective				3	
2nd, Spring	Social Awareness Elective				3	
3rd, Fall	Auto 310 Engine Air Flow Analysis			3		
3rd, Fall	Matl 341 Material Selection Metals			3		
3rd, Fall	Engl 311 Advanced Technical Writing	3				
3rd, Fall	Math 126 Algebra & Analytic Trigonometry		4			
3rd, Fall	MFGE 341 Quality Science Statistics			3		
3rd, Spring	Auto 320 Dynamometer Analysis			3		
3rd, Spring	MFGE 342 Statistical Process			3		
3rd, Spring	Comm 221 Small Group Decision Making	3				
3rd, Spring	Math 216 Applied Calculus		4			
3rd, Spring	Cultural Enrichment				3	
4th, Fall	Auto 450 Automotive Fuels and Lubes			3		
4th, Fall	MFGE 442 Design of Experiments 1			3		
4th, Fall	PDET 322 Model & Prototype Development			2		
4th, Fall	PDET 413 Fluids/Thermodynamics			3		
4th, Fall	Social Awareness				3	
4th, Fall	Cultural Enrichment Elective (200+)				3	
4th, Spring	Auto 460 Emission Systems			3		
4th, Spring	Auto 480 Alternate Fuel and Vehicle System			3		
4th, Spring	MECH 212 Kinematics & Mechanisms			2		
4th, Spring	MFGE 321 Metrology			3		
4th, Spring	PDET 415 Advanced Solid Modeling CAD			2		
4th, Spring	Social Awareness (200+)				3	
4th, Summer	Internship			4		
TOTALS		12	20	81	18	1
Total Credit Hours Required for Completion of the Program			132			

Table 5-2. Course and Section Size Summary

Automotive Engineering Technology

Course No.	Title	Responsible Faculty Member	No. of Sections Offered in Current Year	Avg. Section Enrollment	Lecture[1]	Laboratory[1]	Other[1]
AUTO 111	Manual Transmission & Drivelines	Gage, Gary/ Leonard, Russ/ Upham, Ben	5	14	50%	50%	
AUTO 112	Automotive Brake Systems	Dekoster, Mark/ Gage, Gary/ Alley, Pete	5	10.4	50%	50%	
AUTO 113	Automotive Electricity/Electronics	English, Patrick/ Key, Greg	6	12.75	50%	50%	
AUTO 114	Automotive Engines	Upham, Benjamin/ Wagner, William	5	12.5	50%	50%	
AUTO 115	Suspension, Steering, Alignment Services	Alley, Pete	3	15	50%	50%	
AUTO 117	Electronic Fuel Management Systems	Billings, Rex	5	10.4	50%	50%	
AUTO 200	Service Area	Hachman, Michael/ Leonard, Russ/ McNulty, Matt/ Wagner, Tim	5	10	50%	50%	
AUTO 213	Chassis Electrical/ Electronics	Billings, Rex	5	13.2	60%	40%	
AUTO 310	Engine Air Flow Analysis	Wagner, William	3	16	50%	50%	
AUTO 320	Dynamometer Analysis	Wagner, William	3	13	50%	50%	
AUTO 450	Automotive Fuels and Lubes	Leonard, Russell	3	16	50%	50%	
AUTO 460	Emission Systems	McNulty, Matthew	4	11.25	50%	50%	
AUTO 480	Alternate Fuel and Vehicle System	English, Patrick/ Key, Greg	2	23.5	50%	50%	
MATL 240	Intro to Material Science	Danley, Blaine	12	15	50%	50%	
MATL 341	Material Science Metals	Danley, Blaine	3	28.3	50%	50%	
MECH 212	Kinematics and Mechanisms	Stein, Randy	2	26	50%	50%	
MFGE 321	Metrology	Ovans, Gary/ Rumpf, James	2	17.5	100%		

MFGE 341	Quality Science Statistics	Gregory, Bruce/ Rusco, Mark/ Wist, Joseph	2	28	100%		
MFGE 342	Statistical Process	Gregory, Bruce/ Rusco, Mark/ Wist, Joseph	2	29.5	100%		
MFGE 442	Design of Experiments 1	Rusco, Mark, S./ Wist, Joseph	2	24.5	100%		
PDET 322	Model & Prototype Development	Koepf, William	4	15.25	100%		
PDET 413	Fluids/Thermodynamics	Goosen, Richard	2	24.5	100%		
PDET 415	Advanced Solid Modeling CAD	Koepf, William	1	14	100%		

[1] Enter the appropriate percent for each type of class for each course (e.g., 75% lecture, 25% laboratory).

CRITERION 5. SUPPLEMENTAL DOCUMENTS ATTACHED

1. AET Program brochure
2. AET Curriculum checksheet for academic year 2009/2010
3. FSU General Education checksheet
4. Quality Technology Certificate checksheet
5. AET Internship Packet

CRITERION 6. FACULTY

- **Faculty**

  All Faculty in the College of Engineering Technology are required to have teaching experience as well as industrial experience before they can be hired. As can be seen by the faculty's résumés, they have many years of industrial experience and years of university-level teaching. The degrees vary from manufacturing engineering to material science to automotive to teaching. As can be seen in the new position description for the Automotive Engineering Technology program, the new position requires an automotive engineering BS with a master in engineering or engineering technology within two years. This is all a result of the university plan for increasing standards in both the programs and the faculty. Ferris has a very extensive program review process as well as a post-tenure review process for the faculty. The document includes a very comprehensive development plan. The document is so large it fills a three ring note book and is not included here. The AET academic program review will be available when the ABET review is taking place. Included are the outlines for the program review and faculty post tenure review. All of the subcategories in the three major areas of teaching, research and service are included in the outlines. An example of the Professional Development Grant money that is available from the administration is also included.

  The Automotive Engineering Technology program is very fortunate to have a large number of Faculty. It also has the advantages of using the Manufacturing Engineering Technology, Material Science Engineering Technology, Product Design Engineering Technology and Mechanical Engineering faculty. This gives the program a much broader view and also adds to the varying different professional and degree backgrounds. All advising and counseling takes place through our faculty. The AET Faculty have students assigned to them as their advisees. The students must see the advisor in order to be cleared for registration every semester. The faculty teaching load is 12 credit hours or 18 contacts plus four office hours for advising students. The faculty schedule and individual instructor office hours are posted on the wall outside the faculty offices to ensure students' access to their advisers.

- **Faculty Competencies/Faculty Size**

  There are eleven Automotive faculty that teach in the Automotive Engineering Technology program, along with nine other engineering faculty from the different technical areas that teach the other engineering technology courses. That means that the program has a total of twenty professional, highly technical, specialized Faculty. In the junior/senior years, 66% of the coursework comes from engineering technology departments other than Automotive such as Mechanical, Manufacturing, Product Design, and Material Science. This affords the program the most diverse and professional faculty in any one program. All of their degrees and professional abilities are listed in table 6-2.

- **Authority and Responsibility of Faculty**

  The Faculty basically start all initiatives where curriculum is concerned. If you look at the proposed curriculum change summary and routing sheet, "Form A," you will see that program development is initiated by the program faculty. From there the change request is sent to the department faculty for a vote. The department head or chair gets to vote on it at this point. From there, it moves forward to the college-wide curriculum committee. They discuss the proposal and the changes based on the input from the advisory committees and the accreditation committees. From there, the change request is forwarded to the Dean of the College of Engineering Technology who approves or disapproves the curriculum change. From there, it goes to the University Curriculum committee which is a sub-committee of the Academic Senate at the University level. From there, the Senate moves it forward to the Vice President for Academic Affairs. All initiation and control of rewriting the objectives and the processes are initiated by the Faculty.

  The process used to ensure consistency and quality of the courses taught is defined by the outlines for every course. Each course has a specific outline which includes hours spent on specific topics and each course also has a syllabus that must be followed by every instructor. Therefore, all of the courses taught by all the different instructors have the exact same content and time on the content. That then goes through what we call our Program Review cycle and our evaluation instruments and that varies from about 14 different groups that records performance. Basically we have records and grades, project presentations, portfolios, industrial internship experience, capstone course and then we also have faculty input, student assessment of instruction of each class, the graduate surveys, alumni surveys, employer surveys, and the advisory committee input. We also have the full process of Academic Program Review, an Administrator Program Review, Post-Tenure Faculty Review, and ABET Accreditation Review that monitors these courses so they all mandate the same instruction.

- **Faculty Development**

  The Learner-Centered Teaching Program provides faculty with opportunities to explore new knowledge about teaching and learning, as well as to implement new teaching and assessment methods. Through this program faculty are invited to engage in important discussions, and to develop and use innovative and creative teaching content and methods. Information about specific projects and other opportunities for faculty is listed below.

  <u>Spring 2009 Faculty Learning Opportunities</u>
  - Bridging Campus Classrooms: Connecting Diverse Students
  - Course Portfolios Initiative
  - Critical Thinking Faculty Learning Community: Level I
  - Democritus to Dalton and Beyond
  - Got the SAI Blues?
  - Harnessing the Power of Podcasting
  - Inclusion, Equity, and Diversity in the College Classroom

- Inquiries into Teaching & Learning
- Let's Get Clicking!
- OIC 324 Study Group
- Scholarship of Teaching and Learning Journal Club
- Using Adobe (Macromedia) Flash to Create Rich Media for Instruction
- Wiki Spring Camp

- **Mentoring Faculty**
  Review Faculty Development and Mentoring Support: COEHS will continue its commitment to supporting the growth of all of its faculty as campus leaders in learner-centered education by reviewing its current system for additional opportunities for faculty development and mentoring.
  - New tenure-track faculty (Provide COEHS support through experienced faculty mentors. Identify adequacy of existing system and recommend improvements)
  - Adjunct and temporary faculty (Identify needs in current support system for adjunct faculty and provide additional support for teaching and professional development)
  - Encourage increased participation of existing faculty in faculty development (Review participation rates in existing faculty development processes and identify ways to encourage fuller participation)

- **Faculty Development for College of Engineering Technology**
  The College of Engineering Technology Dean's Office encourages and supports faculty in development activities. Potential activities are selected by an individual faculty member; an application is completed by the faculty member, supported by the Department Chair and submitted to the College of Engineering Technology Associate Dean. Upon receipt, the Associate Dean will evaluate the faculty application and respond directly to the faculty member, providing them a personal approval letter in support of their activity. Approved professional development activities are supported financially for various aspects of the project including travel, lodging, conference fees, support materials, meals, etc. Upon completion of the event, the faculty member is required to submit a project summary report detailing the experience and how this obtained knowledge will support classroom activities. They also share their newly acquired knowledge with faculty peers of their department. Upon review of this report by the Associate Dean, reimbursement funds are then transferred to the department.

Below is a list of faculty development activities for the College of Engineering Technology for the most recent academic year 08/09. The Dean's Office supported over $60,000 in faculty development activities for this academic year. Following this list are three prior years of information for Faculty Development for CET.

<u>Activity</u>

- A Foundation for Your Lean Journey
- ACCA
- ACSM-MARLS-UCLS-WFPS Conf.
- AED & Condex

- ASC National Conf., U of Florida
- ASC Region 3 Meeting & Student Comp.
- ASEE Annual Conference
- ASEE Conference
- ASHRAE Annual Meeting
- ASHRAE conference and AHR Expo
- ASPRS Conference
- Assoc. Gen'l Contractors Conv. And Const. Expo.
- Assoc. Schools of Cons. Reg. III Conf.
- Assoc. Schools of Construction Mid-Year Board Meeting
- Auto Value Tech Expo
- AutoCad Training over Semester Break
- AWS Certified Welding Inspector Seminar and Exam
- AWS: "New Nondestructive Testing Technology Conference"
- BS to Masters Course
- CATIA V5: Advanced Part Design
- Certified Welding Inspector Seminar and Exam
- COE PLM Conference & Technifair
- Delmia Product Lifecycle Management Training
- ECO Build
- Embedded Systems Conf
- Emerson Climate Technologies (Sporlan) Supermarket Seminar
- HVAC Excellence Conf
- IFMA World
- Intl Home Builders Show & NAHB Student Comp
- Materials and Processes for Medical Devices
- MCAA Annual Convention
- MEAC Mech and Elect Faculty Boot Camp
- Medical Devices..Convention
- MSCA 23rd Annual Education Conference
- NACAT Conference
- National Fraud Awareness Conf.
- National Restaurant Show
- Performance Dev of Internal Combustion Engines
- Redefining Manufacturing Education
- SEMA
- Sustainable Energy Future
- Tolman's Auto Tech Group
- Variable Data Print
- Xilinx EDK Workshop

Three prior years of information

Academic year 04/05	Academic year 05/06	Academic year 07/08
COE Conference and Technifair	ASPRS/MAPPS Specialty Conference (11/3-11/06	ASC Region 3 Annual Meeting, Downer's Grove IL (October 24-27)
Continuing Education: Land Development Conference	Associated General Contractors (Mar 20-24)	ASC Region 3 Conf. and Student Comp. - (January 14-16) Requested more info on scope and value. - $1200 Requested
Course - University of Wisconsin	AWS 2006 Exposition (Oct. 30 - Nov. 2)	ASC Region 3 Conf. and Student Comp. - (Oct. 24-27 past) Requested more info on scope and value. - $920 requested
Data Flow Course	AWS Certification Code Clinic and Examination CWI	ASC Region 3 Meeting and Student Competition
Engine Airflow and Fuel Management	Central States Communications Assosiation (3/27-31)	ASEE - Securing Our Engineering Future, New Orlean, LA (Feb 12-15)
Essential Teaching Seminar - MIT	Certification - Concrete Technician Level 1	ASEE Conference for Ind. and Ed. Collab., New Orlean, LA (Feb 13-15)
IAGMASEP National Conference	COE PLM Conference & Technifair (3/9-15/07)	ASEE Conference, Pittsburgh, PA (June 21-26,2008)
Land Rover Course	COE PLM Conference & Technifair (4/28-5/02)	ASEE Executive Committee Planning Meeting
Land Rover Training	Construction Innovation and Ethics (10/29-11/1 06)	ASEE Natiional Conference, Pittsburgh, PA (June 21-26)
Laser Safety Officer Course	ELTI Conference - Oct 7-9	ASEE National Conference (June24-30)
MatLab	Embedded Systems Conference	ASEE National Conference (June24-30)
MEAC Conference	ESRI Survey & Engineering GIS Summit (6/16-19)	ASEE North Central Section Conference & Exec. Mtgs., Dayton,OH (Mar 27-29)
MSPS annual meeting	GATF Variable Data and Personalized Printing	ASEE Zone 1, 2008 Conference, West Point, NY (Mar. 28-29)
North American Council for Automotive Teachers	Guru III - Pico School (2006'03'14) Asked to resubmit in August for November activity	ASHRAWinter Meeting, NY, NY ((Jan 20, 2008)
PTC/User World Event	Institute of Navigation Annual Conference Sept 06'	AutoCad Training, Palos Hills, IL (Jun 16-19)
Real Estate Development	LEED-NC Certification (2/20/07) (was $1200, Suzanne will do this at another date in the future)	Auto-Cad Training, St. Paul, MN (Jan 1-5)
SAE - Race Car Suspension Set-up	Leico Software Training	AVI Conference Ft. Meyers, FL. (Jan 10-13 2008)
Training	M.Brayton,G.Gerber,D.Johnson,J.Kantorowski, S.Miller,J.Schmidt	AWS Conference on Automatic Welding, New Orlean, LA (Mar 13-14)
Variable Data Printing Boot Camp	Michigan Construction Teacher's Winter Conference	AWS Conference on Weld Cracking - (Oct 16-17)
XENITH Extreme Training(Cancelled)	Moved from last years (activity after July 05	AWS Show, Chicago IL (Nov 11-14)
$34,400.00	NACAT Training in July	Certified Radiographic Interpreter Exam and Seminar, Indianapolis, IN(Feb 9-16)
	Pro-E Manufacturing - July 10-14	COE PLM Conf. and TechFair, Orlando, FL (Apr 9 - May 4)
	SEMA (10/31-11/4/06)	CONEXPO, Las Vegas Nevada (Mar 11-15)
	Structural Steel Course	CONEXPO/CONAGG 2008 (March 10-14)
	$39,200.00	CONEXPO-CON/AGG - LasVegas (Mar 11-15) (resubmit corrected in November)
		Database App Dev for Win 32 Using Delphi, SanDiego, CA (Feb 10-15) - Need submit on new forms.
		Ecobuild America and AEC Sci & Tech Anaheim, CA (May 19-22, 2008)
		Engine Design Air Flow Analysis (CANCELLED - reoffered in Apr)
		Federal Mogul Training / Adv. Steering and Suspension, St Louis, MO (June 23-26, 2008)
		Intro to Catia Software, GR. MI (2/25-29) - Resubmitted and approved 2/12
		Intro to Catia Software, GR. MI (2/25-29) - Waiting Re-submit
		JDF Education Event, Ryerson University, Toronto Ont. (Feb. 18)
		LEED Preparation and Certification
		May not be requested - For Coursework
		MDOT Certification-Superpave Asphalt Mix Designs, Lansing,MI (Mar 10-13)
		Med. Devices and Diag. Ind. Conv. -Plastics West, Anaheim,CA (Jan 28-30)
		MI Soc. of Prof. Surveyors Conf., Sault Ste Marie,MI (Feb 19-22)
		NACAT Conference (07/16-20, 2007)
		NAIT Annual Convention, Panama Beach, FL
		Natl Assoc. of Home Builders Show / Student Comp., Orlando, FL (Feb 12-16)
		PAI/GATF Color Management Conference
		Parametric Surface Operations Course
		Parametric Surface Operations Course
		Plastic Injection Mold Design Class (Summer)
		Printing to Int'l Stds, Pittsburgh, PA (May 13-15) DID NOT OCCUR - was awarded $2000
		SAE e-seminar - CAN Vehicle Applications (Summer)
		SEMA, Las Vegas, NV (Oct 28-Nov 3) - Proposal delayed errently in Dept.
		SureTrak training - (July 30-31)
		Troxler Nuclear Safety Training, Lansing MI (Mar 26, 2008)
		Vutek 3360 Training Meredith, NH(Mar 30- Apr 4, 2008) DID NOT OCCUR - was awarded $2000
		World of Concrete, Las Vegas, NV (Jan 23rd-26th)
		$62,400.00

- **Leadership Responsibilities**

College of Engineering Technology **Updated April 5, 2006**

(updated college name December 3, 2008)

Position Description - Academic Department Chair

SUMMARY: The Academic Department Chair provides leadership for the department and its degree programs, faculty and students. The Department Chair is responsible and accountable for the overall successful functioning and operation of the department. This is a faculty position with a 9-month 75% release time and a $14,000 summer semester stipend.

ORGANIZATION AND EVALUATION: The Academic Department Chair works under the supervision and direction of the Dean. An annual performance evaluation of the Chair based on the annual work plan developed by the Dean and the Department Chair will be conducted by the Dean, with input from the Associate Dean.

RESPONSIBILITIES: The Academic Department Chair normally will teach one course in both fall and winter semesters (a 25% teaching load). Exceptions to this policy, either increases or decreases in this teaching load, must be approved by the Dean, College of Engineering Technology. The Department Chair will be assigned 75% release time to carry out all Department Chair-related duties and responsibilities.

Department Chairs will not teach an overload unless there are significant reasons to do so. All Department Chair overloads must be approved by the Dean, College of Engineering Technology in advance. A Department Chair teaching in excess of a 25% teaching load (6 semester hours/9 contact hours annually) will be compensated with overload pay under the annualized workload policy, and will be expected to devote the time and effort of 75% release time to Department Chair duties and responsibilities. The Department Chair will be present during scheduled fall and winter semester breaks as required by the demands of the position and the needs of the College. Between the end of spring semester and the start of fall semester, the Department Chair will be compensated with a stipend of $14,000. Summer semester work schedules will be developed by the Dean and the Department Chair, based on the needs of the college and the department. Potential Department Chair summer semester duties and responsibilities are noted on the attached list of activities.

The specific duties and responsibilities of the Academic Department Chair are extremely numerous and varied. In general, the Department Chair coordinates the efforts of all members of the department organization, including faculty, staff, and students, in such a manner as to ensure that all applicable university, college, department and program missions, goals and objectives are successfully met, consistent with all applicable institutional policies and procedures.

Typically, the Department Chair will perform duties to include, but not limited to: assisting the Associate Dean in developing and assigning schedules, budget planning, department planning, temporary and adjunct faculty appointments, efficiency, rotation list for summer teaching,

curriculum proposals, grants, budget execution (purchasing, travel, supplies, payroll, student payroll) and resources management (facilities, minor cap, voc ed funding, construction, equipment). Within the department, the Department Chair is responsible for accreditation; administrative and academic program review; marketing and recruiting activities; summer orientation and registration; advancement and development activities; program curriculum development; program reports; department meetings; advisory committees; and advising.

QUALIFICATIONS: The Academic Department Chair must be a tenured faculty.

SUMMER SEMESTER ACTIVITIES: During the summer semester, the activities of the Academic Department Chairs will be dictated by university and college requirements and by department and program needs. Typical activities might include, but are not limited to, the following:

- Prepare for and conduct summer orientation and registration.
- Recruitment activities and conduct campus/departmental tours for prospective students and their families
- Attend regular College of Engineering Technology Department Chairs meetings
- Prepare summary report of May and August graduate employment/salary data
- Develop/maintain industry contacts and fund raising/gifts in kind/grant activities
- Accreditation and Academic Program Review activities Preparation for annual planning cycle
- Draft winter semester course schedules
- Advising the Dean on potential fall and winter overloads and request fill for temporary/adjunct faculty needs
- Participate in faculty search activities as required
- Update/communicate with faculty as required
- Coordinate summer computer support issues, including loading of new software
- Coordinate technical laboratory/equipment maintenance, repair and calibration
- Coordinate installation of new/donated equipment
- Program/department specific issues (institute leadership, capital outlay activities, etc.)

Table 6-1a. Faculty Workload Summary

Automotive Engineering Technology

Faculty Member (name)	FT or PT[4]	Classes Taught (Course No./Credit Hrs.) Term and Year[1]	Total Activity Distribution[2]		
			Teaching	Consulting	Other[3]
Alley, Pete	FT	AUTO 112 (Fall), 115 (Spring)	100%		
Billings, Rex	FT	AUTO 117 (Spring), 213 (Fall)	100%		
Danley, Blaine	FT	MATL 240 (Fall), 341 (Fall)	100%		
Dekoster, Mark	FT	AUTO 112 (Fall)	100%		
English, Patrick	FT	AUTO 113 (Fall & Spring), 480 (Spring)	100%		
Gage, Gary	FT	AUTO 111 (Fall), AUTO 112 (Fall)	100%		
Goosen, Richard	FT	PDET 413 (Fall)	100%		
Gregory, Bruce	FT	MFGE 341 (Fall), MFGE 342 (Spring	100%		
Hachman, Michael	FT	AUTO 200 (Fall & Spring)	100%		
Key, Greg	FT	AUTO 113 (Fall) , 480 (Spring)	25%		75% dept. chair
Koepf, William	FT	PDET 322 (Fall), 415 (Spring)	100%		
Leonard, Russell	FT	AUTO 111 (Fall), 200 (Fall & Spring), 450 (Fall)	100%		
Ovans, Gary	FT	MFGE 321 (Spring)	100%		
McNulty, Matthew	FT	AUTO 200 (Fall & Spring), 460 (Spring)	100%		
Rumpf, James	FT	MFGE 321 (Spring)	50%		50% union pres.
Rusco, Mark, S.	FT	MFGE 341 (Fall), 342 (Spring), 442 (Fall)	100%		
Upham, Benjamin	FT	AUTO 111 (Fall), 114 (Spring)	100%		
Wagner, William	FT	AUTO 114 (Spring), 310 (Fall), 320 (Spring)	100%		
Wist, Joseph	FT	MFGE 341 (Fall), 342 (Spring), 442 (Fall)	100%		
Stein, Randy	FT	MECH 212 (Spring)	100%		

[1] Indicate Term and Year for which data apply.
[2] Activity distribution should be in percent of effort. Members' activities should total 100%.
[3] Indicate sabbatical leave, etc., under "Other."
[4] FT = Full Time Faculty PT = Part Time Faculty

Table 6-1b. Faculty Workload Summary

	Range	Average
Credit Hours	16-22	19
Contact Hours Per Week	12 – 18 contact + 4 advisor hours	17
Laboratory Size	15 lab	15
Class Size	30 lecture	30
Advisees	Apx 30 per faculty member	30

A full time teaching load is defined by FSU and the Ferris Faculty Association's (FFA) contract as 12 lecture or 18 contact hours, whichever is first.

Table 6-2. Faculty Analysis

Ferris State University Automotive Engineering Technology

Name	Rank	Type of Academic Appointment TT, T, NTT	FT or PT	Degrees	Institution from which Degrees Earned & Year	Years of Experience			Professional Registration/ Certification	Level of Activity (high, med, low, none) in:		
						Govt./Industry Practice	Teaching	This Institution		Professional Society	Professional Development	Work in Industry
Alley, Pete	Prof	TT	FT	MS-Occupational Ed BS-Trade Technical Ed AAS-Auto Service	FSU 1992 FSU-1976 FSU- 1969	6	28	28	ASE	Med	Low	High
Billings, Rex	Prof	TT	FT	MS-Occupational Ed BS-Trade Tech Ed AAS-Auto Service ASE-Master Certified ASE-L1 Advanced IMACA-refrigerant Cert	FSU, 1988 FSU, 1981 Montcalm C, 1979	0	25	18	ASE	Med NACAT LAGMASEP	High	Med
Danley, Blaine	Assoc Prof	TT	FT	MS-Metallurgical& Material BS-Technical Ed	MI Tech MI Tech	12	6	6		High	High	Med
Dekoster, Mark	Assist Prof	TT	FT	BS Trade Tech AAS-Auto Service ASE Master Certified ASE ADV Engine L1	FSU FSU	18	19	2	ASE Mi Dept of Ed	High Sponsoring member IATN	High	Med
English, Patrick	Assist. Prof	TT	FT	MS, Workforce Ed and Development BS-Vocational-Ind Ed AS Auto Service Manage AS-Auto Tech ASE Master Auto Certified ASE	Penn State, 2002 Penn State, 1995 Penn College, 1992 Penn College, 1991	8	10	1	ASE Bar, MI PA Dept of Ed	High	High	Med

Gage, Gary	Assist Prof	TT	FT	MS-Career and Tech Ed BS- Technical Education Master Certified ASE Auto Tech L1 Certification St of MI Certified Master Tech ASE L1 Adv Engine Perfor	FSU FSU, 2002	18	9	8	ASE Bar, MI MI, Dept of Ed	High	High	High
Goosen, Richard	Assoc Prof	TT	FT	MS – Electrical Engineering, BS – Electrical Engineering, BS – General Engineering, US Higher Educational Leadership, ABD, Western Michigan University	Ohio University, 85 Kansas State University, 78 Military Academy, 74 Western MI University	14	13	13		High	High	High
Gregory, Bruce	Assoc Prof	TT	FT	MS – Applied and Mathematical Statistics, MS – Occupational Education, BS – Manufacturing Engineering Technology, AAS – Machine Tool,	The Rochester Institute of Technology, 1993 Ferris State University, 1997 Ferris State College, 1978 Ferris State College, 1975	6	23	23		High	High	High
Hachman, Michael	Prof	TT	FT	MS - BS - Trade Tech Teaching, AAS - Auto Service, Certificate - Auto Machine, ASE Certified	MSU 1986 1986 FS College 1971 FS College 1969 Ferris State College, 1967	2	33	33	ASE	Med	Med	Med
Key, Greg	Prof Depart Chair	TT	FT	MS - Technical Manufacturing BS - Industrial Education	EMU, 1986 WMU, 1978	5	25	19	ASE	Med	high	Med
Koepf, William	Prof	TT	FT	MS – Engineering Management BS – Product Design Engineering Technology AAS – Technical Drafting and Tool Design	WMU 2004 FSU, 1991 FSU, 1989	9	6	6		Low	High	High
Leonard, Russell	Assist Prof	TT	FT	MS - Education, BS - Industrial Arts Education Higher Educational Leadership, ABD ASE Master Automotive Certification	WSU, 1997 CMU, 1991 WMU	16	9	4	ASE	High SAE	High	High

Ovans, Gary	Prof	TT	FT	MS – Occupational Education, BS – Industrial Technology BS – Sociology/Physics Focus	FSU, 1991 UW-Stout, 1976 UW Eau Claire, 1975				High	High	High	
McNulty, Matthew	Assist Prof	TT	FT	MS- Vocational-Technical Administration BS -, Industrial Education	EMU MSU	10	20	2	ASE Bar, MI MI Dept	High	High	Med
Rumpf, James	Assoc Prof	TT	FT	MS – Electrical Engineering, BS-Mechanical Engineering	1988 GM Institute, 1982	18	16	16		High	High	High
Rusco, Mark, S.	Assist Prof	TT	FT	MS – Business Administration BS – Mechanical Engineering	CMU 1988 MSU, 1983	15	20	9		Med	high	High
Upham, Benjamin	Assoc Prof	TT	FT	MS - Career and Technical Education BS - Technical Education, AAS - Auto Service, ASE Master Technical, M.A.C.S. Certification, Ford Master Certified	FSU FSU, 1992 FSU, 1987	10	8	8	ASE, Bar, MI MI, Dept of Ed	Low	High	High
Wagner, William	Assist Prof	TT	FT	BS - Technical Education, AAS - Automotive Service Technology	FSU, 1976 FSU 1972	10	8	8	ASE	Med	Med	Med
Wist, Joseph	Assist Prof	TT	FT	MS – Metallurgical Engineering BS – Mechanical Engineering	MI Tech U, 1992 MI tech U, 1989					High	High	High
Stein, Randy	Assoc Prof	TT										

Instructions: Complete table for each member of the faculty of the program. Use additional sheets if necessary. Updated information is to be provided at the time of the visit. The level of activity should reflect an average over the year prior to visit plus the two previous years.

Column 3 Code: TT = Tenure Track T = Tenured NTT = Non Tenure Track

CRITERION 7. FACILITIES

The AET program is housed in the Automotive Center which used to be the entire College of Engineering Technology. The Automotive Center consists of 77,000 square feet of lecture and lab space which is more than adequate and it is the largest College of Engineering Technology facility for any one program within the College. As a result of our last ABET visit, we are installing and building a dynamometer test cell valued at over $400,000 with installation costs. This shows the commitment of the University to affording accrediting to programs. We also have created a dedicated lab for AET Capstone projects and for the Mini-baja and Formula One teams.

Within the Automotive Center is a computer lab available exclusively for Automotive Students and it is available well into the evening hours, Monday through Friday.

The Automotive Center was the first wireless building on campus. We currently have three “smart lecture rooms” and, during the summer of 2009, we are building a new alignment room.

CRITERION 8. SUPPORT

- **Program Budget Process and Sources of Financial Support**

  The Dean in the College of Engineering Technology developed a committee of faculty members to research and develop a process for the Supply and Expense (S&E) budget that would more appropriately reflect current enrollment trends rather than historical enrollment trends. This process was applied this year and the AET program greatly benefited from it because of its large enrollment size. This process will support all growth programs now and in the future.

- **Sources of Financial Support**

  Sources of financial support come from many different directions, both on and off the University campus. Hard money such as faculty salaries, benefits, building, building maintenance, utilities, minor caps (construction renovation) come from the general fund and are reallocated through the divisions for the AET program. S&E money is supplied through the College of Engineering Technology for the AET program for supplies and expenditures. Equipment money is dispensed annually by the Dean of the College of Engineering Technology and the Vice President's office. As an example, this year we spent $49,000 total on test equipment and specialty tools; please see attached spreadsheet for breakdown. Soft money comes from donations from the major automotive corporations. This year we received ten new vehicles, one being a $106,000 Lexus hybrid. We have on hand 80 brand new vehicles that were donated. We also receive specialty tools donated from many different avenues.

- **Adequacy of Budget**

  This soft money of donations, along with the hard money, seems to be a more than adequate budget. For example, the last ABET review slated the need for a new chassis dynamometer (dyno). Since that time, a University equipment budget of $110,000 was given to the AET program to purchase the dyno. Furthermore, the University has contracted with a company to install the dyno and built a dyno cell and classroom around the dyno with a cost of $500,000. Please see attached.

- **Support of Faculty Professional Development**

  Support for faculty development comes from three major areas: One is S&E money which is used to support professional development. This year, we spent $11,000 on professional development with another $7,300 coming from the College of Engineering Technology Professional Development Fund and also from Academic Affairs. The other avenue that we have for professional development is the Timme Grant which is available for application through the University's Faculty Center for Teaching and Learning twice annually. The Senate Professional Development committee also has grants available through a competitive process.

- **Adequacy of Equipment**

  Sufficiency of resources to acquire, maintain and operate facilities and equipment is done through the use of a full time technician allocated to the Automotive Department to keep equipment operating.

- **Adequacy of Support Personnel and Institutional Services**

  Our immediate support personnel consists of one faculty member as department chair with ¾ release time, one full time department secretary, one full time account clerk and one full time

technician. All of the other support divisions such as Academic Affairs, Business and Financial, Skilled Trades, etc., are more than ample to support the educational objectives and program outcomes.

- **Program Advisement**

  Per Advisory Board member Chetan Joshi, we should add more computer engineering to the AET program. ABET also cited this concern at their last visit. One of the requirements of the AET program was to be able to use computer applications in the design part of automotive. As a result of that input, you can see the curriculum change we made in 2006 to add ETEC 140, Engineering Graphics Comprehensive. Since that time, and partially as a result of input from the Advisory Committee Meeting, we have added PDET 415, Advanced Solid Modeling CAD, which increases the ProE engineering software course of study to a full year of design using ProE engineering software.

CRITERION 8. SUPPLEMENTAL DOCUMENTS ATTACHED

1. AET Travel – Professional Development/Conferences and Training, Recruiting, and Internship expenditure sheets
2. Automotive equipment/specialty tools purchased 2008/2009 breakdown sheet

CRITERION 9. PROGRAM CRITERIA

According to the program criteria, the program must demonstrate that graduates have a working knowledge of the design, manufacture, and maintenance of major subsystems and technologies associated with land, sea, air, and space mobility. All of our students must demonstrate a working ability of design through the final design project in the Advanced 3D Modeling course, PDET 415. Furthermore, our students take a four-course sequence in Manufacturing courses which also affords them a Quality Technology Certificate as can be seen by the internship and job placement. All of our students work in major companies in various subsystems of technologies in the automotive field and are evaluated by our internship capstone course and industry. Please see attached internship placement document.

CRITERION 9. SUPPLEMENTAL DOCUMENTS ATTACHED

1. AET Internship placement document.
2. Quality Technology Certificate checksheet.
3. 2009-2010 Criteria for Accrediting Engineering Technology Programs, Lead Society: SAE, International.

APPENDIX A – COURSE SYLLABI

See Syllabi following this title page.

APPENDIX B – FACULTY RESUMES

See resumes following this title page.

APPENDIX C – LABORATORY EQUIPMENT

See laboratory equipment following this title page.

APPENDIX D – INSTITUTIONAL SUMMARY

The institution may employ any means it chooses to represent itself to ABET and the visiting team. Consequently, the references to specific tables in the following are for guidance only. The information may be presented in any manner the institution chooses.

The Institution

Ferris State University
1201 S. State Street, CSS 201
Big Rapids, MI 49307-2747

Name and title of chief executive officer:
David L. Eisler, DMA
President

Type of Control

State of Michigan Public Four-Year Institution

Please see organizational charts for Academic Affairs Division and the College of Engineering Technology on the preceding pages. Note that these documents are reproduced from the FSU Fact book and are updated annually.

History of Institution

Ferris State University is recognized for its career-oriented educational programs that are designed to meet the technology and work force demands of business and industry, the healthcare professions, and society in general through applied research and practical education.

Ferris will begin celebrating 125 years since our founding in 1884 on September 3, 2009. A series of special events are planned for this celebration year. Visit www.ferris.edu/alumni/historical/ to learn more about the history of Ferris.

History of the Engineering Technology Unit

The Big Rapids Industrial School was founded in 1884. In that same year the name was changed to the Ferris Industrial School. In 1894 the first trade program was offered under the new Telegraphy Department. The name of the school was changed again in 1899 to Ferris Institute. Starting in 1946, there arose a demand for continued education by veterans of World War II. In that year, a broad program of trade and industrial education was launched. In 1950 Ferris Institute ceased to be a private institution and became Ferris State College. And when the institution changed from private to public, it began to rely on state funding as well as tuition, fees, gifts, and grants from private individuals and industry. In 1956 the Trade and Industrial Division was established and 16 programs were offered. The Trade and Industrial Division and the Collegiate Technical Division merged to form the School of Technical and Applied Arts in 1964. Four years later the School reorganized into six departments: Automotive, Construction, Electrical and Electronics, General, Graphic Arts and Industrial. The first engineering technology program, the AAS in Mechanical Engineering Technology, was initiated in 1970. By 1972, twenty-five associates, two bachelors and six certification programs were offered. Ferris State

College became Ferris State University in 1987 and in 1988 the School of Technology was renamed to the College of Technology. The name changed again in 2008 from the College of Technology to College of Engineering Technology to reflect the ever-changing industry.

Presently, the College of Engineering Technology offers 33 technically oriented programs including associate and baccalaureate degrees through twelve departments.

In recent years, there has been a steady decline in state support as a percentage of the total budget requirements. More information concerning this declining state revenue contribution can be found here: http://www.ferris.edu/htmls/administration/president/budget.htm This decline has been made up, in part, by raising tuition. Also, the College is relying more and more on grants, cash gifts, equipment donations, and consignments of large pieces of equipment. As long as the University continues to maintain its strong programs it should expect to retain adequate funding. In October 2001, the position of Assistant Dean for College Advancement was filled to help meet these needs. The College of Engineering Technology continues to expect to prosper by expanding and intensifying its efforts in seeking supplemental income and resources.

History of Institution	
January 6, 1853	Woodbridge Nathan Ferris born near Spencer, Tioga County, New York
September 7, 1853	Helen Frances Gillespie born in New Haven, New York
December 23, 1874	W.N. Ferris and Helen Frances Gillespie married at her home in Fulton, New York
September 1, 1884	W.N. Ferris and W.G. Ferris open the Big Rapids Industrial School in temporary quarters in the Vandersluis Block (present location of J.C. Penney Company) in Big Rapids.
January, 1885	Big Rapids Industrial School moves to permanent home at the northwest corner of Michigan and Maple Streets in the Big Rapids Northern National Bank Building.
January, 1885	Name of Big Rapids Industrial School changed to Ferris Industrial School
1893	Marius Preysz asks W.N. Ferris for training in pharmacy. His success in passing the state board examination encourages Mr. Ferris for training in pharmacy. His success in passing the state board examination encourages Mr. Ferris to establish a pharmacy department.
January, 1894	Ferris Industrial School moves into and dedicates its new building (Old Main) on the corner of Oak and Ives Streets.
January, 1894	Ferris Industrial School incorporated, with capital stock of $50,000.
1898	Name changed from Ferris Industrial School to Ferris Institute.
1900	W.N. Ferris sells capital stock in Ferris Institute to the public, keeping a controlling interest in his own hands.
1901	Pharmacy Annex Building constructed.
1901	Helen Gillespie Ferris retires as teacher and Vice President of Ferris Institute.
1902	Bert Scott Travis becomes secretary and treasurer of Ferris Institute. Gerrit Masselink becomes Vice President of Ferris Institute.

January 1, 1913	W.N. Ferris inaugurated Governor of Michigan.
January 1, 1915	W.N. Ferris inaugurated Governor of Michigan for second term.
March 23, 1917	Helen Gillespie Ferris dies.
August 14, 1922	W.N. Ferris marries Mary Ethel McCloud of Indianapolis, Indiana.
November 7, 1922	W.N. Ferris elected United States Senator from Michigan.
1923	W.N. Ferris sells controlling interest in Ferris Institute to Gerrit Masselink and Bert Scott Travis. Ferris Institute is reorganized as a non-profit school with non dividend bearing stock.
October 30, 1926	First homecoming, sponsored by Phi Sigma Chi fraternity.
March 23, 1928	W.N. Ferris dies in Washington DC
March 24, 1928	Gerrit Masselink takes office as second President of Ferris Institute.
April 25, 1929	Gerrit Masselink dies. An advisory board of Grover C. Baker, E.M. Clark, K.G. Merrill and E.J. Parr chosen to manage the school. E.M. Clark, as chair of the board becomes acting president.
September 4, 1929	Alpheus A. Worcester takes office as acting President.
October 19, 1929	Alumni building dedicated.
July 1, 1930	Wells D. White takes office as fourth President.
August 25, 1931	The Board of Incorporators, a group of 39 businessmen purchase Ferris Institute from the old stockholders and select a board of trustees from their number to govern school.
February 12, 1931	Pioneer sports writer Lester “Jap” Williams gives the Ferris Institute athletic teams (notably the Basketball team) the nickname “Bulldogs.”
1931	Wells D. White leaves the presidency, an executive board consisting of E.M. Clark, E.J. Parr and K.G. Merrill chosen to manage the school. E.M. Clark, as chairman of the board is acting President.
1931	B.S. Travis retires as secretary and treasurer of Ferris Institute, but continues teaching.
1932	Ernest E. Brown, of Oklahoma takes office as fifth President
February 14, 1936	Ernest E. Brown leaves the Presidency to become President of Northwestern State Teachers College in Alva, Oklahoma.
February 17, 1936	E.M. Clark appointed acting President.
July 13, 1936	Merle S. Ward takes office as seventh President.
February, 1943	Ferris Institute alumnus Colin Smith introduces a bill in the legislature for the state to purchase Ferris Institute. It passes both houses but is vetoed by Gov. Harry Kelly.
April, 1946	Merle S. Ward leaves the Presidency after a misunderstanding with the Board of Trustees.
July 10, 1946	Byron J. Brophy takes office as President.

May 17, 1949	Governor G. Mennen Williams signs bill accepting Ferris Institute as a gift to the State of Michigan, which will take over its governance on July 1, 1950.
February 21, 1950	Old Main and Old Pharmacy buildings destroyed by fire, only the Alumni Building and some minor buildings left standing.
July 1, 1950	Ferris Institute becomes a state college.
February, 1952	Byron J. Brophy resigns as President because of ill health.
February, 1952	Karl G. Merrill named acting President.
September 8, 1952	Victor F. Spathelf takes office as tenth President.
July 1, 1963	Name changed from Ferris Institute to Ferris State College.
Fall, 1968	First Ferris undefeated football team. Bob Leach, coach.
December 15, 1970	Victor F. Spathelf retires as President.
December 16, 1970	John R. Smith takes office as acting President
March 15, 1971	Robert L. Ewigleben takes office as 12th President.
1983-1984	Celebration of centennial of Ferris State College.
July 1, 1984	J. William Wenrich takes office as 13th President.
November, 1987	Name changed from Ferris State College to Ferris State University.
September 5, 1988	J. William Wenrich leaves the Presidency.
September 6, 1988	Roy J. Tiede takes office as interim President.
July 31, 1989	Roy J. Tiede ends his term as interim President
August 1, 1989	Helen Popovich takes office as 15th President
July 31, 1994	Helen Popovich retires as President
August 1, 1994	William A. Sederburg takes office as interim President.
August 1, 1995	William A. Sederburg officially appointed the 16th President.
May, 2003	William A. Sederburg leaves office to accept position as President of Utah Valley State College
May, 2003	Scott Hill-Kennedy appointed as interim President.
July, 2003	David L. Eisler takes office as the 18th President.
2008	College of Technology name changed to College of Engineering Technology

Student Body

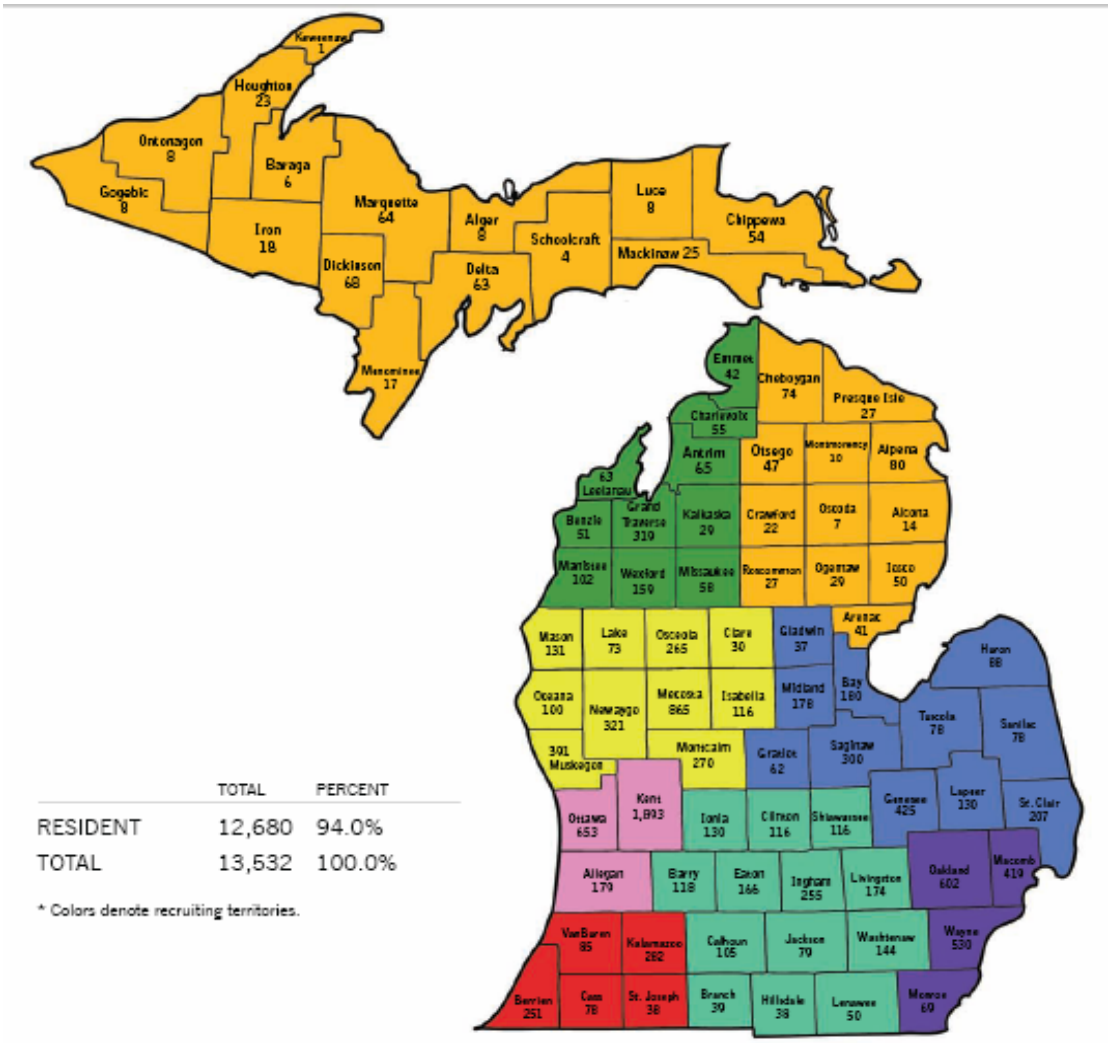
"Students come to Ferris because there is no public institution of higher education in Michigan who has our unique blend of technical, professional and interdisciplinary programs that prepare students for careers," President Eisler stated.

Student Enrollment by College

ALLIED HEALTH SCIENCES	2,314
ARTS & SCIENCES	1,763
BUSINESS	2,473
COLLEGE OF PROF & TECH STUDIES	223
EDUCATION & HUMAN SERVICES	1,993
KENDALL COLLEGE OF ART & DESIGN	1,352
MICHIGAN COLLEGE OF OPTOMETRY	146
PHARMACY	546
ENGINEERING TECHNOLOGY	2,160
UNIVERSITY COLLEGE	562
TOTAL	13,532

STUDENTS/ENROLLMENT

Enrollment by county (Fall Semester 2008)



	TOTAL	PERCENT
RESIDENT	12,680	94.0%
TOTAL	13,532	100.0%

* Colors denote recruiting territories.

Alabama 2
Illinois 163
Montana 4
Rhode Island 0
Alaska 4
Indiana 61
Nebraska 1
South Carolina 3
Arizona 3
Iowa 9
Nevada 2
South Dakota 6
Arkansas 0
Kansas 6
New Hampshire 1
Tennessee 7
California 30
Kentucky 1
New Jersey 10
Texas 9
Colorado 11
Louisiana 1

New Mexico 2
Utah 6
Connecticut 2
Maine 0
New York 18
Vermont 0
Delaware 3
Maryland 11
North Carolina 6
Virginia 6
Florida 9
Massachusetts 8
North Dakota 1
Washington 2
Georgia 7
Minnesota 25
Ohio 50
West Virginia 0
Hawaii 0
Mississippi 1
Oklahoma 4
Wisconsin 53

Idaho 1
Missouri 5
Oregon 4
Wyoming 0
Pennsylvania 10
Unidentified 122

TOTAL 690

TOTAL STATES 43

Africa 8
Asia 54
Europe 7
North America 60
Botswana 2
Bangladesh 1
Cyprus 1
Canada 59
Congo 1
China 2
Finland 1

Mexico 1
Cameroon 1
Hong Kong 1
Sweden 1
Kenya 1
Indonesia 1
Turkey 1
South and
Nigeria 3
India 35
United Kingdom 3

Central America 1
Japan 2
Venezuela 1
South Korea 6
Middle East 9
Myanmar 1
Afghanistan 1
Unidentified 23
Philippines 1
Iran 1
Vietnam 4

Kuwait 1
Saudi Arabia 6

TOTAL 162

TOTAL COUNTRIES 27

Source: Office of Institutional Research & Testing

Regional and Institutional Accreditation

Ferris State University

1201 S. State Street
CSS 301
Big Rapids, MI 49307-2737

http://www.ferris.edu

Chief Executive Officer: **Dr. David L. Eisler, President**
Name change notes: Ferris Institute to Ferris State College (1964) to Ferris State University (1987)
HLC Institution ID: **1321**
Current Accreditation Status: **Accredited**
Accreditation Date(s): **(1959- .)**
Commission Participation: **PEAQ PARTICIPANT**
Participation Notes: **Participating in the Academy for Assessment of Student Learning.**

Year of Last PEAQ Comprehensive Evaluation: **2000 - 2001**
Year of Next PEAQ Comprehensive Evaluation: **2010 - 2011**

Last Action: **07/03/2008**

Legal Status: **Public**
Degrees Awarded (details below): **A, B, M, 1st prof**

Stipulations on Affiliation Status:
International offerings are limited to the Bachelor's program in Technical Education at Red River College in Winnipeg, Manitoba, Canada.
Approval of New Degree Sites:
The Commission's Streamlined Review Process is only available for offering existing degree programs at new sites within the state.
Approval of Distance Education Degrees:
No prior Commission required to offer online degree programs.
Reports Required:
None.
Other Visits Scheduled:
None.

Enrollment Headcount (last updated: 04/07/2009)

	Full-Time	Part-Time
Undergraduate:	9093	3157
Graduate:	779	503
Post-baccalaureate First Professional:	0	0

Other Headcounts (last updated: 04/07/2009)

Non-Credit headcount:	0
Dual enrollment (high school) programs:	260

Degree Programs (last updated: 04/07/2009)

	Programs Offered	Degrees Awarded in Last Reported Year
Associate Degrees	42	861
Bachelors Degrees	123	1839
Masters Degrees	13	137
Specialist Degrees	0	0
First Professional Degrees	2	158
Doctoral Degrees	0	0

Certificate Programs (last updated: 04/07/2009)

	Programs Offered	Certificates Awarded in Last Reported Year
Certificates	59	264

Off-Campus Activities (last updated: 05/28/2009) Click here for definitions...

In-State:	Campuses:	Grand Rapids (Kendall)
	Sites:	Alpena (Northern - Alpena) ; Clinton Township (Clinton Township) ; Clinton Township (Southeast - Clinton Township) ; Dowagiac (Southwest - Dowagiac) ; Escanaba (Northern - Escanaba) ; Flint (Southeast - Flint) ; Garden City (Southeast - Garden City) ; Gaylord (Northern - Gaylord) ; Grand Blanc (Southeast - Grand Blanc) ; Harrison (Harrison) ; Howell (Southeast - Howell) ; Kalamazoo (Main - Kalamazoo) ; Lansing (Southeast - Lansing) ; Midland (Southeast - Midland) ; Muskegon (Southwest - Muskegon) ; Petoskey (Northern - Petoskey) ; Port Huron (Southeast - Post Huron) ; Roscommon (Northern - Roscommon) ; Scottville (Northern - Scottville) ; Traverse City (Northern - Traverse City) ; University Center (Southeast - University Center) ; Warren (Southeast - Warren)
	Course Locations:	18
Out-of-State:	Campuses:	None
	Sites:	None
	Course Locations:	None
Out-of-U.S.:	Campuses:	None
	Sites:	None
	Course Locations:	None

Distance Learning (last updated: 04/07/2009)

This listing is limited to programs that are delivered 100% asynchronously.
Bachelor of Nuclear Medicine Technology (Internet)
Bachelor's Degree Completion Program in Dental Hygiene (Internet)
BS in Heating, Ventilation, Air Conditioning and Refrigeration (Internet)
Master of Business Administration (Internet)
MS in Nursing (Internet)
Pro-Mo-Ted: BS in Technical Education and Training in Business and Industry (Internet)
RN to BSN (Internet)

Certificate - Business-to-Business Marketing (Internet)
Certificate - Direct Marketing (Internet)
Certificate - E-Commerce Marketing (Internet)
Certificate - Facilities Management (Internet)
Certificate - Geographic Information Systems (Internet)
Certificate - Nursing Education (Internet)

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PERSONNEL AND POLICIES

Please see the following University Personnel and Policy documents

College of Engineering Technology Promotion and Tenure Policy included in this section.
FSU Academic Affairs Policy letter – vacant position salaries policy and procedures included in this section.
Also included in this section is the HRD Faculty Benefits in brief documentation.

PROMOTION AND TENURE POLICY

College of Engineering Technology -

Department Tenure Policy and Procedures

Approving Departments:

- Architectural Technology & Facility Management
- Automotive
- Construction Technology and Management
- Heavy Equipment
- HVACR
- Manufacturing
- Mechanical Design
- Plastics and Rubber
- Printing & Imaging Technology Management
- Surveying Engineering
- Welding Engineering Technology

VPAA Signature:	**Date:**

Revised January 24th, 2008

Preamble

The system of tenure is a device for affecting a stable and professional instructional staff by providing for security in teaching, research, and extramural activities.

An effective tenure program provides that, after a probationary period, members of the college who are qualified for tenure will have continuing employment, and their service will be terminated for adequate cause alone.

Implicit in any tenure program is the necessary assumption that technological change; legislative fiat, public preference, or the judgment of the Board of Trustees would render certain programs within the institution, or the institution itself, purposeless or nonexistent.

Implicit, likewise, in a tenure program, is the presumption that the Board of Trustees, in accordance with the FFA-FSU contract, would exercise the utmost good faith in its efforts to reassign tenured personnel to areas where their abilities would be of benefit to the institution.

Where tenure programs are in operation, the following represents acceptable academic practices:

- Each member of the faculty is expected to demonstrate, throughout all areas of specifically assigned and implied duties, effectiveness, competence, professionalism, good character and conduct; and a functioning spirit and willing cooperation with colleagues.
- The crucial importance of any tenure program lies in its objective mechanism for protecting the tenured faculty member from an unwarranted dismissal arising either out of good faith error or from hasty caprice. It is equally important to preserve the integrity of the tenured faculty members by expressing its sanction of a merited dismissal.
- Evaluations of teaching for tenure purposes are conducted in a manner that does not infringe on academic freedom. Classroom observations are carried out as silently and unobtrusively as possible.

In the event that there is a conflict between this policy and the FSU and FFA agreement, the FSU and FFA Agreement shall be the controlling document.

Document Abbreviations –

CET – College of Engineering Technology

CTRC – Candidate Tenure Review Committee

DTRC – Department Tenure Review Committee

FSU/FFA – FSU & FFA Contract (Expires June 2010)

SAI - Student Assessment of Instruction

This policy shall apply only to those tenure candidates hired after its formal implementation. Tenure candidates hired prior to the implementation of the amendments may elect to be reviewed by the newly

implemented policies and procedures or the policy and procedures otherwise applicable pursuant to this Agreement. Selection of amended policy and procedures by a candidate shall not extend their non-tenured period.

I. ***Tenure Attainment Criteria***

A. The primary professional goal of faculty in the College of Engineering Technology is to attain excellence in teaching.

1. ***Teaching:***

The candidate shall demonstrate superior qualities as a teacher as evidenced by:

a) *Development of new or existing programs, courses, and teaching methods.*

b) *Statements by peers, Peer Group Evaluation (Appendix C), relating to an individual faculty member's instructional performance, depth of understanding in their subject area, and related contribution to the university, college, and department.*

c) *Statements by the Candidate's Tenure Review Committee, Candidate's Observation Guide (Appendix B) and Department Chair, Associate Dean Evaluation form (Appendix E), regarding instructional competency.*

d) *Student opinion relating to faculty performance supported by a college approved student evaluation that addresses, as a minimum, the elements in the Student Assessment of Instruction (Appendix A).*

e) *Teaching awards.*

2. *Advising:*

The candidate shall demonstrate superior qualities as an advisor as evidenced by:

a) *Ability to deal with student academic problems and opportunities.*

b) *Advisor to student organizations.*

c) *Special tutor assistance to students in department offered courses.*

d) *Student academic counseling and advising.*

B. Additional activities considered for granting tenure include:

1. Scholarly activities including:

a) Consulting for pertinent professional agencies, business, or industry.

b) Developing new course techniques.

c) Obtaining professional certification or registration (where applicable).

d) Participating in continuing education as a lecturer, author, developer of educational materials, or as a learner.

e) Professional development through practice in business, industry or applied research.

f) Publishing books or monographs.

g) Serving as a journal referee.

h) Serving as a member of a certifying board.

i) Serving as a member of a school or program evaluation team.

j) Submitting grant or contract proposals.

k) Other activities deemed worthy by the program, department and/or college.

2. Service activities including
   a) Assisting in program equipment procurement.
   b) Demonstrating cooperation with peers in professional and promotional activities of the department/program.
   c) Demonstrating willingness to join with colleagues in advancing the common interest of the University.
   d) Performing administrative responsibilities such as committee chairpersons, etc.
   e) Providing contribution or service to their profession and/or professionally related community service.
   f) Providing services to the community.
   g) Representing the University to governmental agencies, alumni and other organizations.
   h) Serving as officers or active members of a county, state, national, or international professional organization.
   i) Serving on department, college and University committees.
   j) Serving on the Faculty Senate.

II. Tenure Committees

A. Candidate's Tenure Review Committee (CTRC)

1. *Member's right to a tenure committee* - Each probationary faculty member shall have their own tenure committee until such time as tenure is granted or denied.
2. *Committee Composition* – The committee shall have three tenured voting members chosen as follows:
   a) *Member Selection* – The Department Chair shall initially appoint three tenured faculty members, as approved or elected by the tenured department faculty, to serve on the CTRC. Two members of the committee shall teach in the same program(s) as the candidate. The third member shall be from another department within the College of Engineering Technology (CET). When the candidate's program(s) has insufficient tenured faculty, CTRC members shall be selected from other program areas within the department. When there are insufficient tenured faculty in the department, CTRC positions shall be filled through selection by the Department Chair from the CET. Appointments will be subject to member approval and the consent of the tenured faculty members within the department.
   b) *Chair Selection* –
      - *First year - CTRC Chair is selected by the Department Chair as approved or elected by tenured department faculty.*
      - *Subsequent years* - The candidate may select the CTRC member to serve as the Committee Chair.
   c) *Vacancies* - The Department Chair, after consultation with the candidate and the CTRC, shall appoint a tenured faculty member to fill any vacancies on the committee per policy.
3. *Committee Responsibility* – The CTRC shall provide an annual report to the Department Tenure Review Committee (DTRC – see section II.B). A copy of the annual report shall be provided to the Associate Dean's Office by the DTRC Chair. The report shall be logged and placed in the candidate's tenure file.

4. *Candidate's File* - The CTRC shall be provided with a locked file, in an office designated by the Associate Dean, for storage of all documents and reviews submitted by the committees, tenured faculty of the program, Department Chair and Associate Dean. The file of any tenure-track candidate shall be available for inspection by tenured faculty members of the department or the CTRC. Candidates shall have access only to their own file in the presence of their CTRC Chair, DTRC Chair, or the Associate Dean.

B. Department Tenure Review Committee (DTRC)

1. *Committee Responsibility* - The DTRC will supervise the actions of the various CTRC's of their department and assure that they operate in conformity with the provisions and timetable of this policy.
2. *Composition* – The DTRC shall consist of all tenured faculty within the department. When the candidate's department has less than three tenured faculty, DTRC members shall be selected from other tenured College of Engineering Technology faculty by the Department Chair.
3. *Chair Selection* - The chair of the Department Tenure Review Committee shall be determined by election within the DTRC.

III. Tenure Evaluation Procedures

- ***This procedure is intended as a complete chronological guide for tenure-track candidates and their tenure committees. In the event that there is a conflict between these procedures and the FSU and FFA agreement, the FSU and FFA Agreement shall be the controlling document. (This document provides convenient tenure event calendar summaries in Appendix F.)***

A. First and Subsequent Years (prior to the tenure request year)

The tenure-track period commences the first fall semester after hire. This section provides the evaluation procedure for the tenure candidate up to the last year of the tenure-track period. Section B. contains the procedures for the final tenure-track year - also referred to as the tenure request year.

1. *First Year Introduction to Tenure Process* – Early in the first Fall semester of the tenure-track period, the chair of the Department Tenure Review Committee (DTRC) shall meet with the candidate. At that meeting a copy and explanation of this Department Tenure Policy and Procedures and FSU/FFA Agreement will be provided.
    - Completion by September 30th.
2. *Yearly Resume Update* – The candidate shall present to their tenure committee an up-to-date Yearly Resume (Appendix D-1), which shall have particular emphasis on meeting the suggested tenure criteria. The completed Yearly Resume shall be filed in the candidate's tenure file, located in the Associate Dean's Office.
    - Completion by October 15th.
3. *Student Assessment of Instruction* – SAI surveys will be completed by students enrolled in each course and section instructed by the candidate for both fall and spring semesters.
    a) *Dates of administration* –
        - Fall semester - between October 15th and November 1st.
        - Spring semester - between March 15th and March 30th.
    b) *Procedure* -
        - The candidate will select the proctor to conduct the assessments.
        - Proctor returns completed assessments to the Department Secretary.

- Department Secretary will forward assessments to the Associate Dean's Office.
- The Associate Dean's Office will record receipt, send to testing, and file results in the candidate's tenure folder.
- SAI's and test results will be sent to the candidate before October 1st of the Fall semester and March 1st of the Spring semester.

4. *Candidate Observation Guide* - The Candidate's Observation Guide (Appendix B) shall be completed by each member of the Candidate's Tenure Review Committee and at least one member of the Department Tenure Review Committee during the Fall and Spring semesters. The Department Chair shall complete a Candidate's Observation Guide each Fall semester.

   Submission dates are -

   - Fall semester by October 15th
   - Spring semester by March 30th

   Completed forms shall be filed in the candidate's tenure file, in an office designated by the Associate Dean.

5. *Peer Reviews* –

   a) The Candidate's Tenure Review Committee shall request that the candidate's program peers and other tenured faculty within the candidate's department complete the Peer Group Evaluation (Appendix C).

   b) The Department Chair shall complete the Peer Group Evaluation at least once each Fall semester.

   Submission dates are -

   - Fall semester by October 15th
   - Spring semester by March 30th

   Completed forms shall be filed in the candidate's tenure file, in an office designated by the Associate Dean.

6. *Tenure Review Committees' Annual Evaluations* –

   a) *Candidate's Support Documentation* – The candidate may submit support documentation to the CTRC to support their continued non-tenured appointment.
      - Submission prior to CTRC Preliminary Evaluation and by November 1st

   b) *CTRC Preliminary Evaluation* - The Candidate's Tenure Review Committee will advise the non-tenured member of its preliminary evaluation and recommendation for appointment or non-reappointment.
      - Completion by November 1st

   c) *CTRC forwards evaluation/recommendation to DTRC.*
      - Submission by November 1st

   d) *Member meeting with DTRC* –
      - The Candidate may submit, to the DTRC Chair, a written request to meet with the DTRC to discuss the preliminary evaluation by November 1st.
      - The Candidate will be offered the opportunity to meet on or before November 10th.

   e) *DTRC Final Evaluation* - The DTRC shall forward, in writing, their final evaluation and recommendation, along with supporting documents, to the candidate, the Department Tenure Review Committee, Department Chair and the Associate Dean.
      - Completion by November 20th

7. *Candidate's Professional Development Plan* – The candidate shall prepare a Professional Development Plan (Appendix D-2). The plan will:
   a) outline the candidate's near term strategy for professional development.
   b) be updated annually in consultation with the Department Chair and CTRC.
   c) be signed by the candidate, the Department Chair and the CTRC Chair.

   Completed forms shall be filed in the candidate's tenure file, in an office designated by the Associate Dean.
   - Submitted by November 20th
8. *Candidate's Written Response* - Candidates who disagree with any or all of the DTRC's annual evaluation must submit a written response to the Associate Dean. The response must identify all aspects with which there is disagreement and factual basis for such disagreement. This response will be attached and remain with the DTRC'S evaluation/recommendation.
   - Submission by November 30th
9. *Annual Associate Dean Evaluation*
   a) The Associate Dean shall visit at least one class of each College candidate during the Fall semester.
   b) A written copy of the Associate Dean Evaluation (Appendix E) will be provided to the tenure track candidate.
      - Submission by December 10th
   c) The Associate Dean's evaluation/recommendation, the candidate's Professional Development Plan, the CTRC and DTRC's evaluations/recommendations, candidate responses and other related materials will be forwarded to the Dean.
      - By December 10th
10. *Candidate's Written Response* - Candidates who disagree with any or all of the Associate Dean's annual evaluation must submit a written response to the Dean. The response must identify all aspects with which there is disagreement and factual basis for such disagreement. This response will be attached and remain with the review.
    - Submission by December 20th
11. *Dean's Recommendation* - The Dean's recommendation will be submitted with all materials to the VPAA.
    - Submission on or before January 15th
12. *VPAA Decision* –
    a) *First Year* – The decision to grant or deny reappointment rests solely with the VPAA.
       - Formal Notice by March 15th
    b) *Subsequent Years* - The decision to grant or deny tenure requires affirmative recommendations by both the DTRC and the VPAA. Failure of DTRC to file paperwork to the Associate Dean in a timely manner constitutes complete concurrence with the VPAA's decision.
       - Formal Notice by January 30th
13. *Non-reappointment* – In the event of non-reappointment, the specific reasons will be cited in writing.
    a) Appeal Procedure –
       - In the event that both the DTRC and VPAA agree for non-reappointment, the appeal is limited to a claim that contractual or department/college procedures were not followed.

- In the event that either the DTRC or VPAA recommend non-reappointment, appeal (not limited to procedure) may be made to the President.

b) Written Appeals must state specific reasons in writing and be delivered to the office of the President of FSU.
   - First year - Delivered on or before April 15th.
   - Subsequent years - Delivered on or before February 15th.

c) The President's decision is final.

d) Failures on the part of the tenure committees are exempt from the appeal process.

B. Requesting Year

1. *Application for Tenure* - A tenure track candidate must apply for tenure no later than their fifth academic year. Failure to apply for tenure consideration shall result in denial of tenure.
   a) A tenure track candidate with an initial academic rank of instructor or assistant professor may not apply for tenure prior to their fifth year.
   b) A tenure-track candidate with an initial academic rank of associate professor may not apply for tenure prior to their fourth year.
   c) A tenure track candidate with an initial academic rank of professor may not apply for tenure prior to their third year.
2. *Request Notification* - The Department Tenure Review Committee (DTRC) shall send a notice to all candidates in their requesting year to inform them that they are to submit a letter requesting tenure along with credentials to substantiate the request.
   - By September 1st
3. *Candidate Letter and Portfolio* - The candidate shall submit a portfolio containing a letter requesting tenure, current resume, classes taken, additional formal education (including progress towards degree requirements) and other supporting material to their Department Tenure Review Committee. The portfolio should be formatted in similar order and content as that of the CET promotion portfolio.
   - By October 1st
4. *Notice of Intended Recommendation* - The DTRC will advise candidate of its evaluation and intended recommendation.
   - By November 1st
5. *Candidate meeting with DTRC* - The applicant may request in writing a meeting with the DTRC, which shall be scheduled as soon as reasonably possible.
   - By November 15th

   The final recommendation of the DTRC shall not be made until after the meeting.
6. *Department Vote* -
   a) The tenured faculty of the department shall vote by secret ballot to grant or deny tenure. Outcome will be determined by majority vote of the tenured faculty of the department.
      - Department vote taken by November 30th
   b) Vote Sequence - The voting will be done in two parts.
      - A first vote will be taken to grant or deny tenure.
      - When majority votes to deny tenure, a second vote shall be taken to determine if the candidate will be denied or given one additional tenure track year.

- *Department Decision* - The results of the vote shall be forwarded, in writing, with all supporting documentation, and recommendation to the candidate, Department Chair, and Associate Dean by December 15th.

c) The written recommendation shall be one of the following:
   - Grant tenure beginning with the start of the University's next academic year.
   - Grant one additional tenure track year during which the applicant must fulfill specific conditions in order to be eligible for tenure. Upon completion of that conditional year, the tenure application process will again be followed. In the event of denial of tenure, employment will be terminated at the end of the academic year in which tenured is denied.
   - Deny tenure and terminate employment at the end of the next regular academic year.

7. The Associate Dean will provide, in writing, their evaluation and recommendation to the Dean of the College of Engineering Technology and to the candidate.
8. The Dean will provide, in writing, their evaluation and recommendation to the Vice President of Academic Affairs.
9. The VPAA shall notify, in writing, their decision to grant or deny tenure.
   - By March 1st
10. If either the VPAA or the DTRC recommends the granting of an additional year, that year is granted. A candidate can be granted only one extension. When the DTRC recommends granting of tenure and the VPAA concurs, tenure is awarded. In all other cases it is denied.
11. The candidate's tenure review file shall be kept for an additional three years after the date of denial. The candidate may appeal the denial, in writing, to the President of FSU.
    - Appeal deadline March 15th
12. The President of FSU, following a review of the tenure materials, shall communicate in writing their decision to grant tenure, deny tenure, or grant one additional non-tenured year, provided that such a year has not previously been granted. The decision of the President of FSU is final, binding and not subject to arbitration.
13. If tenure is granted, it will begin with the start of the University's next academic year and the candidate's tenure files shall be destroyed.
    - Note: Copies of recommendations are to be filed in the candidate's file, located in the Dean's office, and personnel file, located in the Human Resources office.

IV. Review and Amendment

Department Tenure Policy and Procedure guidelines for implementation and amendments are provided within the contract under Section 3 of the FSU-FFA contract.

PROMOTION/MERIT POLICY

I. Introduction

It is the intent of this policy to recognize the unique nature of the programs within the College of Engineering Technology and the diversity of the experiential backgrounds of the faculty involved in these programs. In keeping with the diversity, this policy contains less structured criteria than a policy that may be applicable in a more "traditional" educational setting.

The Ferris philosophy places emphasis on teaching and advising; therefore, in the process of reviewing faculty being considered for promotional recommendations, emphasis will be placed on the teaching and advising capabilities of the faculty. Additional emphasis will be given to areas of professional development and contributions to Ferris. This policy was developed for full-time teaching faculty in the College of Engineering Technology as they become eligible for promotional consideration in the following academic ranks: Assistant Professor, Associate Professor, Professor, and merit within rank.

When a person meets the minimum qualifications for a special instructional rank, it should not be assumed nor construed that the person will be appointed or advanced automatically to that rank. Rather, the intent of this policy is that all eligible persons (i.e., persons who meet the minimum qualifications) will be considered for promotion upon submission of a portfolio to the Promotion Committee; however, promotion in rank will be a selective process from among the candidates, to identify and advance those individuals who are judged to be best qualified to hold the higher rank. Applicants will request consideration for either promotion or merit, but not both.

Current policies of college/group will continue and any changes will be implemented when approved by the Dean, a majority vote of the promotion committee, and a majority vote of the CET faculty.

A. Committee Membership

1. The College of Technology Promotion Committee will consist of twelve (12) members: one (1) member from each Department.

   [a]. All of the Committee members will be tenured bargaining unit faculty from the College of Engineering Technology. Fifty percent (50%) shall be appointed by the Dean through a departmental eligibility list presented to the Dean. Departments without representation shall elect a tenured bargaining unit faculty member as their Committee rep.
   [b]. Each rep shall serve a two-year term. Terms will be staggered to replace fifty percent (50%) of the Committee each year
   [c]. Appointments and election of members within each Department will occur during April of each year.
   [d]. A Committee member will be ineligible for promotion consideration during the term of Committee membership.
   [e]. In the event an elected member is unable to complete a term, the Department shall elect a rep to fill the vacancy.

2. The Chair of the Promotion Committee will be elected from the bargaining unit members of the Committee.

B. Promotion Review Process

1. The candidate is responsible to present a portfolio, consisting of no more than a three-ring binder, not to exceed one and one-half (1 ½) inches as measured at both spine and open edge, to the Committee by October 15**.** Since it is possible that some accomplishments or eligibility requirements may have been met prior to the last promotion/merit increase, the candidate must document these achievements within the portfolio. Consideration will be given only to accomplishments of the applicant since

his/her last promotion or merit increase, or date of hire, whichever is more recent. The candidate will date all material submitted. If material is not dated, it will be disregarded.

[a]. This portfolio will include information and data pertinent to the candidate's professional qualifications, demonstrating achievement in the following areas: teaching, work experience, professional development, contributions to Ferris beyond teaching, involvement in professional organizations/activities, innovative educational activities, publications, research, and other relevant information. (Candidates are to refer to the Appendix on page 6 in preparing their portfolio according to the defined sequence and section areas.)

[b]. A request for waiver of eligibility requirements is to be submitted on the Waiver Request form with justification and/or supporting statements attached and shall be submitted no later than September 15. The criteria will be waived for the candidate upon a majority vote of the Promotion Committee. The committee determines eligibility for promotion based on the materials provided within the portfolio. It is in the best interest of the applicant to apply for a waiver if he/she has any doubts regarding eligibility**.** (See "Waiver Procedures" section on page 4).

[c]. The candidate must provide in the portfolio, *summary data* from all SAI's (student assessment instruments) completed since the last promotion or merit. Comment sheets may be included.

[d]. The candidate must have a total of four (4), and only four (4), Colleague Evaluation forms from selected individuals sent directly to the Committee.

(1) Minimum of one evaluation(s) from faculty in the candidate's department.

(2) Minimum of one evaluation(s) from faculty outside the candidate's department, but within the College of Engineering Technology.

(3) Minimum of one evaluation(s) from individual(s) outside the CET, but within the University.

[e]. It is the candidate's responsibility to follow up on the submittal of colleague evaluations.

[f]. All information forwarded to the Promotion Committee will be held in confidence and the candidate's portfolio will be returned to the candidate upon completion of the promotion process. Recommendations and colleague evaluations sent directly to the Committee will not be returned.

[g]. Candidates are responsible to ensure that all pertinent information is included.

[h]. Failure to comply with policy shall be cause for removal of candidate for promotion/merit.

2. The Promotion Committee will undertake the review process of all candidates. A quorum of the Promotion Committee will meet and discuss portfolios prior to the committee submitting the final ranking. The Committee shall transmit a ranked list to the Dean indicating:

[a]. The individuals applying for promotion within the College that it recommends for promotion/merit. The number of recommendations shall be equal to or less than the number of promotions/merits available for the College. If the number of promotions/merits is less than the number of promotions/merits available in the College, the unused promotions/merits may be carried forward for use in future years.

[b]. A rank ordering (extra list) of the additional individuals approved for promotion/merit within the College that the Committee decides to recommend.

[c]. The Promotion Committee will, at this time, notify the individual candidates whether they were or were not on the lists of candidates transmitted to the Dean.

[d]. The Dean may add persons to the extra list in any position order which he/she believes is appropriate, but not altering the relative order established by the Promotion Committee. The Dean shall forward the lists to the Vice President for Academic Affairs.

II. Eligibility

A. To be eligible for promotional consideration, candidates must meet all of the following criteria prior to application. "Professional experience" refers to years of work experience, teaching, military service, or administrative duties, which can be documented and are significantly relevant to the individual's teaching assignment. All information to be referenced by source, date, and time duration.

1. Instructor Or Technical Instructor To Assistant Professor

   [a]. Baccalaureate degree.
   [b]. Five years of professional experience, at least three of which must be in teaching.
   [c]. Three years at the rank of technical instructor or instructor at Ferris State University.

2. Assistant Professor To Associate Professor

   [a]. Masters degree.
   [b]. Ten years of professional experience, at least five of which must be in teaching.
   [c]. Four years at the rank of Assistant Professor at Ferris State University.
   [d]. Four years since last merit increase.

3. Associate Professor To Professor

   [a]. Masters degree plus 30 semester/45 term hours of a planned program to support your area of expertise. Time spent in professional development activities may apply towards the semester hours at the rate of 8 contact hours equaling .5 semester credit hours. Time spent in professional development activities may include seminars, workshops, and instructional activities provided by industry, educational institutions, and professional organizations. Participation and completion must be documented. The spirit of this paragraph is on education, not application.
   [b]. Fifteen years of professional experience, at least ten of which must be in teaching.
   [c]. Four years at the rank of Associate Professor at Ferris State University.
   [d]. Four years since last merit increase.

4. Merit Increases

   [a]. Merit increases are an addition to advancement in rank, but not a substitute for such advancement. Hence, the criteria and procedures for merit increases are the same as for promotion with the following additions:

      1. Merit increases can only be given to those who have been advanced in rank to the maximum rank consistent with their promotion credentials as defined by the appropriate college/university/unit promotion policy.
      2. A tenured bargaining unit member is eligible to apply for a merit increase only after a minimum of four years since his/her last advancement in rank or prior merit increase.
      3. Consideration will be given only to accomplishments of the applicant since his/her last promotion or merit increase, or date of hire, whichever is more recent.

B. Waiver Procedures

1. The Promotion Committee may waive any eligibility requirements by a majority vote. Recommendations for exceptions to academic requirements will be considered when other conditions warrant (e.g., license or certification, additional professional experience, related professional recognition or achievement).
2. Requests for consideration for this waiver must be in writing to the Promotion Committee, submitted on the Promotion Policy Waiver request form with justification and/or supporting statement attached. Also attach a copy of the Information Request form (see page 8).
3. If the request for waiver is approved, the approval letter must be submitted along with and in the front of the portfolio. An approved waiver is valid for one year.

4. If a candidate's request for a waiver is denied based on an application for promotion, that candidate does not automatically become eligible for consideration for a merit award; the candidate may then submit his or her portfolio with an application for merit award if he/she meets those requirements.

FSU Academic Affairs Policy Letter [May 9, 2000]

http://www.ferris.edu/HTMLS/administration/academicaffairs/policyLetters/revisedvacPos.htm

VACANT POSITION SALARIES POLICY AND PROCEDURE POLICY:

Salary savings from vacant positions in Academic Affairs are captured centrally immediately after the position is vacated, and all vacant positions revert to Academic Affairs for review and possible reallocation. The policy for requesting to fill a vacant position, requesting salary augmentation of a vacant position, and access to vacant position salary to meet classroom replacement needs are as follows:

The Hiring Approval Form (HAF) request to permanently fill a vacant tenure-track position or to fill a vacancy with a one-year temporary person must include justification for the request. The justification must include faculty loads, release time or overloads, and adjunct, one-semester or one-year temporary faculty in the program/curriculum for the past two years. In addition, future plans for program focus, enrollment and staffing must be included in the justification.

The justification for the salary request must include data from comparable national or regional institutions of higher education, and/or business and industry data that documents the need for this salary to competitively recruit qualified faculty and staff. This information must accompany the HAF. A copy of the position vacancy announcement must also be included.

If the HAF is approved by the VPAA, the salary for either the permanent replacement (as long as it does not exceed the budget in the vacant position – see #4) or the one-year temporary replacement will be fully funded by the Operations Analyst in the Academic Affairs Office. No additional funding requests will be required.

If the HAF is requesting a salary greater than the budget in the vacant position, a request for salary augmentation must be made on the HAF. If approved by the VPAA, the augmentation will be funded from differential salary funds central to the Division of Academic Affairs, or if such funds are not available, augmentation will be requested from the University's pooled compensation.

If a vacant tenure-track faculty position is not filled during a fiscal year, the dean may request that the classroom duties of that position be met through adjunct, overload, or one-semester temporary replacements (all must be coded 1411 – vacant position replacement – on the EAA). The request must be submitted to the Operations Analyst in the Vice President for Academic Affairs Office, and must identify the vacant position number requiring the replacement need. If the request is approved by the VPAA, a funding source (position number) will be provided from which the associated costs will be funded. **This funding source must appear on the EAA** . If the funding source is not identified on the EAA, it **will not be processed** by the Finance Office, which may result in a delay of a paycheck being issued.

Procedure:
At such time that a replacement adjunct, overload, or one-semester temporary person has been identified to fill a vacancy need, the following steps for funding approval must be completed:
Send an E-mail to the Operations Analyst in the VPAA's Office with the following information:

- vacant position number requiring replacement need
- person who previously filled now vacant position
- type of replacement (adjunct, overload, or one-semester temporary)
- replacement position number
- replacement account number
- name of replacement
- dollar amount needed for replacement expenses

Example:

Vacant Position Number: 11111
Previously Filled By: John Doe
Temporary Replacement Type: one-semester temp
Replacement Position Number: 810XXX
Replacement Account Number: X-XXXXX-**1411**
Replacement Name: Jane Doe
$ needed for Replacement: $5,000

If the funding request is approved by the VPAA, the Operations Analyst will "reply with history" to the E-mail as follows:
"APPROVED – FUND FROM POSITION XXXXXX"
Print a copy of the returned E-mail with the approval and identified funding source.
In the comment section of the EAA, include the words and **highlight**:

"**FUNDED FROM POSITION XXXXXX – SEE ATTACHED APPROVAL"**
Attach a copy of the E-mail approval to the original EAA and the pink copy that is forwarded to the VPAA's Office, and then distribute the EAA to the appropriate departments.

FACULTY BENEFITS

FULL TIME 9 AND 12 MONTH FACULTY (FFA) Effective 11/1/08 I:\Benefits\IN-BRIEF\Facbib08-09.doc, 11/5/2008

BENEFITS SUMMARY

IF YOU HAVE ANY QUESTIONS ABOUT THIS INFORMATION, CONTACT THE OFFICE OF HUMAN RESOURCES, RACHEL CORNELISSE AT 231-591-3874

Medical

Insurance Plan MESSA Super-Care I - PAK A

$10/$20 brand name drug co-pay
100% coverage of reasonable and customary charges for inpatient procedures

Cost to Employee

Single: $25.50/per pay
2 Person: $50.24/per pay
Family: $55.19/per pay

Deductible $100/person per calendar year

$200/family per calendar year

90%/10% coverage for master medical charges

Riders w/ Medical Plan

Hearing Aid
Preventative Care

The plan includes required pre-admission review for all inpatient procedures and mandatory second opinion for certain surgeries.

Insurance Plan MESSA Choices II PPO – PAK C

$10/$20 brand name drug co-pay
In Network Deductible $0, Out of Network Deductible $250 individual, $500 family per calendar year.

Cost to Employee

Single: $7.16/per pay
2 Person: $13.98/per pay
Family: $15.34/per pay

Deductible **In Network Deductible** $0
Out of Network Deductible $250 individual, $500 Family per calendar year
Preventative Care included in coverage for In Network Only
The plan includes required pre-admission review for all inpatient procedures and mandatory second opinion for certain surgeries.

In lieu of medical coverage, employees may elect an amount in cash, a medical reimbursement plan, MESSA Options and/or an MEFSA annuity product.

Opt – Out of Medical Only Option – PAK B

$50.00 Per Pay Reimbursement FULL TIME

Flexible Spending Accounts

FFA members are eligible to participate in a Flexible Spending Account program for medical and dependent care expenses. Employees may set aside money each pay period on a tax-free basis into one or both flexible spending accounts. Contact HRD at (231) 591-3877 for more information. The plan includes required pre-admission review for all inpatient procedures and mandatory second opinion for certain surgeries.

Dental

Insurance Plan Delta Dental

80-80-80-50(orthodontic) benefit level
$1000 maximum per person per year

$1100 lifetime maximum orthodontic rider

Orthodontic coverage is available to age 19.

Vision

Insurance Plan MESSA VSP-2 Silver

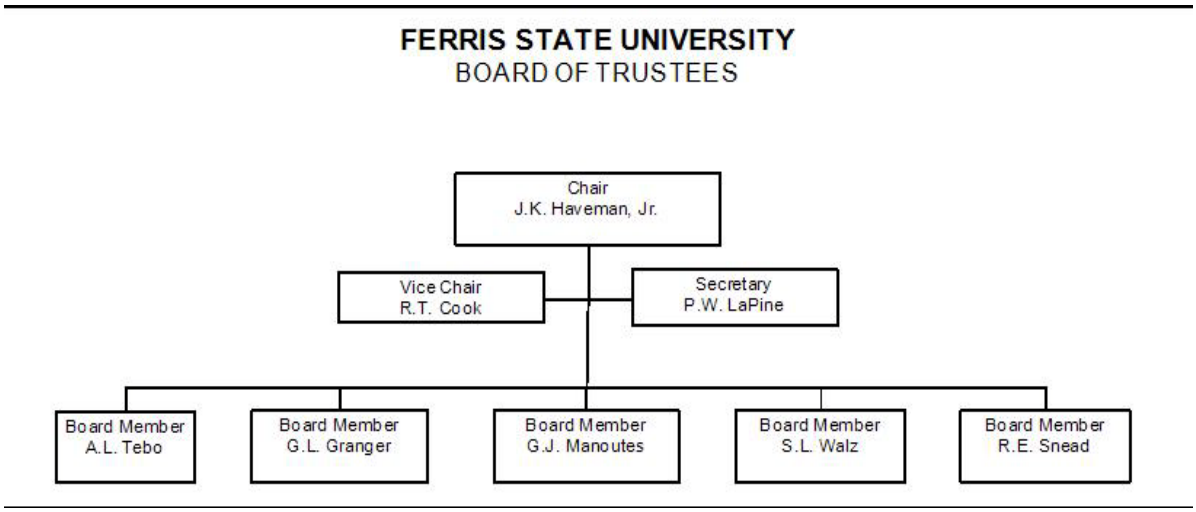
Coverage allows for an exam and a pair of lenses and frames or pair of contact lenses less applicable plan co-pays at a participating provider each plan year.

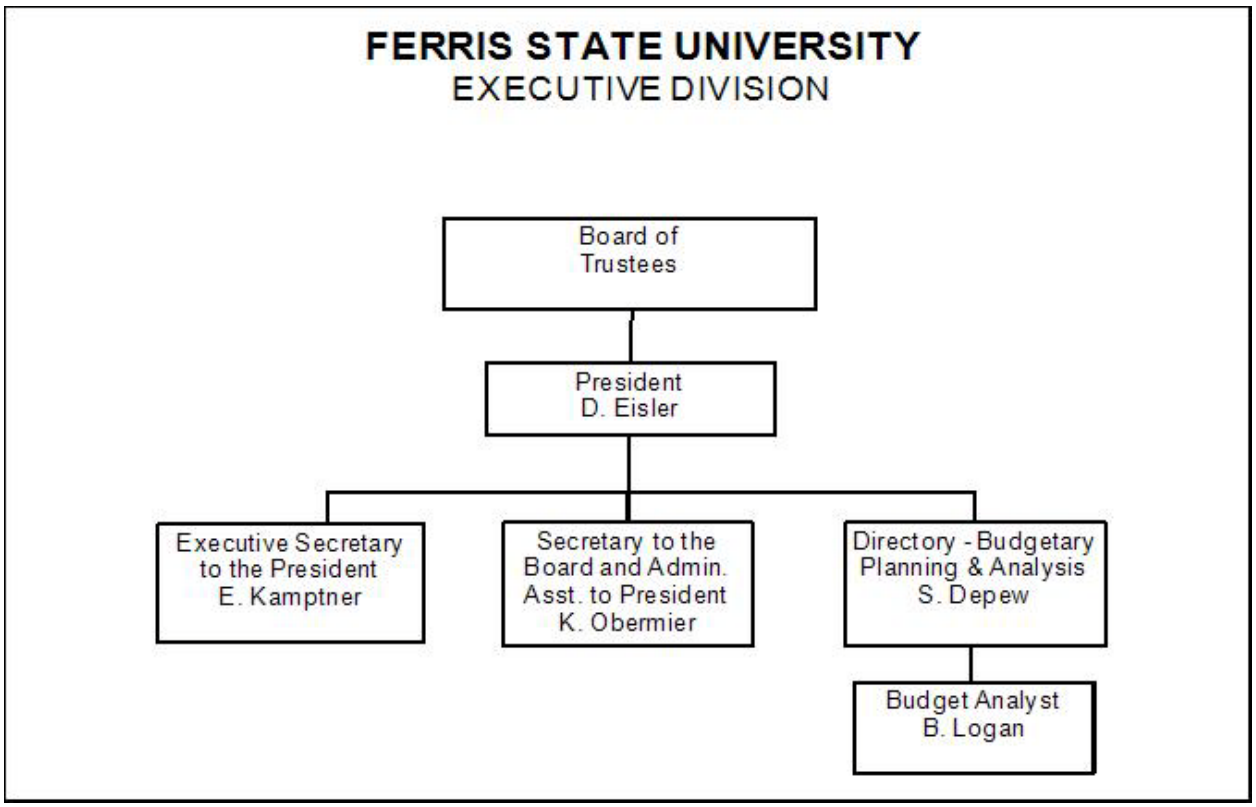
OTHER BENEFITS AVAILABLE: Long Term Disability	90 day elimination period plan. After elimination period, benefit is 66 2/3% of monthly salary, maximum of $5,000 per month to age 65 or until the end of disability, whichever occurs first.
Life Insurance - *Employee*	$50,000 Group Term Life Insurance at no cost to the employee; additional amounts may be purchased at the employee's cost. Evidence of insurability may be required.
Life Insurance - *Family*	$2,000 coverage for spouse and each dependent child at the employee's cost.
Retirement	12% of gross salary is contributed to either TIAA-CREF or Fidelity Investments for retirement purposes. See the enrollment packet for the appropriate company for more information. Employees who have had prior university service in the Michigan Public Schools Employees Retirement Systems are eligible to continue their MPSERS retirement plan. Some restrictions apply.
FULL TIME 9 AND 12 MONTH FACULTY (FFA) Effective 11/1/08 **Tax Shelter Retirement Programs:** **403(b) Plan** **457(b) Plan**	Voluntary 403(b) Retirement Plans are also available through payroll deductions with any of the following companies: AIG Retirement, Equitable, Fidelity Investments, Lincoln National, Massachusetts Mutual, MEA Financial Services, or TIAA-CREF. The following companies also participate in a voluntary 457(b) Retirement Plan: AIG Retirement, Fidelity Investments, Lincoln National, MEA Financial Services or TIAA-CREF. Please note: These plans are subject to applicable IRS guidelines.
Tuition Waiver – *Employee* **Tuition Waiver – *Spouse/Dependent***	May take up to eight (8) FSU credits per semester, under-graduate or graduate, at no cost. Classes taken must have appropriate administrative approval. Graduate level classes are taxable based on current IRS guidelines. **~OR~** May transfer up to eight (8) of the employee's available tuition waiver credits to a spouse and/or child OR spouse and/or child may receive a 30% tuition discount. This benefit applies only to FSU credit classes and graduate level classes are taxable based on current IRS guidelines.
Sick Leave	**Accrues at the rate 4.0 hours per pay (maximum accrual is 300 days) and is available for use by employee upon employment. A sick leave bank is available for use by employees who find themselves without sick leave accumulations and have not yet met the elimination period for long-term disability. See current bargaining unit agreement for further details.**
Vacation	*(12 month faculty only)* Accrues at the rate of 6.15 hours per pay (maximum accrual is twenty (20) days per year).
Holidays	After 10 days of employment, twelve month, full time employees are granted holiday pay for the following holidays: New Year's Day Thanksgiving Day Good Friday Day after Thanksgiving Memorial Day Christmas Eve July 4th Christmas Day Labor Day New Year's Eve Additional paid holiday time may be granted by the President.
Personal Leave	*(12 Month Librarians and Counselors only)* Two (2) personal days, one not chargeable and one chargeable to sick leave will be available each fiscal year. These days are not cumulative.
Bereavement Leave	Up to four (4) days of leave will be granted for the death of an immediate family member. One (1) day of leave will be granted for extended family members. See your current bargaining unit agreement for definition of immediate and extended family.
Court Required Services	Any employee serving jury duty or subpoenaed to testify in court, will be paid the difference between his/her pay for jury duty and his/her regular pay.
FULL TIME 9 AND 12 MONTH FACULTY (FFA)	Employees injured in a work-related accident may be eligible for

Effective 11/1/08 Workers' Compensation	compensation.
Medical/Maternity **Paternity Leave**	Handled in accordance with University Family and Medical Leave Act (FMLA) policy. (See also your current collective bargaining unit agreement and the University Personnel Policies)
Military Leave	When ordered by State or Federal Government, military leave will be granted on an individual basis in accordance with applicable State/Federal laws.
Credit Union	Payroll deductions and other banking services are available through West Michigan State Employee's Credit Union (WMSECU).
Direct Deposit	Available to any bank associated with the Federal Reserve.
Savings Bonds	May be purchased through payroll deduction.
EAS	Employee Assistance Services 7 free visits per plan year available to employee and/or dependents for Counseling needs.
Dining Services	All employees will receive a 25% discount with ID at any of the food units on campus.
Internet Services	All employees can receive internet access at a reduced rate per year. Contact the Telecommunications Department at (231) 591-2901.
FORD Partner Recognition Plan	Ferris State University in cooperation with Ford Motor Company provide an educational discount to full time employees of Ferris State University. For more information visit the Ferris web site at: www.Ferris.edu: Faculty/Staff: Office of Human Resources: Benefits and click on the Ford symbol.
Computer Purchases	All employees can receive a discount for Dell Computer personal purchases. http://www.ferris.edu/fsuintranet/dell/dellprices/personal.htm
MESP – Michigan Education Savings Plan	Michigan Education Savings Plan (MESP) is an opportunity for family and friends to invest in the educational future of a beneficiary. MESP provides the following advantages: No Income Limits – Parents, grandparents, relatives, and friends at any income level may open an account and contribute to the MESP on behalf of a beneficiary. Tax Advantages – The amount you contribute each year can be deducted from you Michigan taxable income up to a maximum of $10,000 for joint filers and $5,000 for individual. Account earnings grow on both a Federal and State tax-deferred basis. Earnings used to pay for qualified higher education are exempt from federal and Michigan state income tax. Flexibility – Funds in the account may be used at any eligible educational institution in the nation. The savings may also be applied to other required educational expenses such as books, supplies, etc. For additional information please contact HR at 591-2150 or visit the MESP website at www.misaves.com

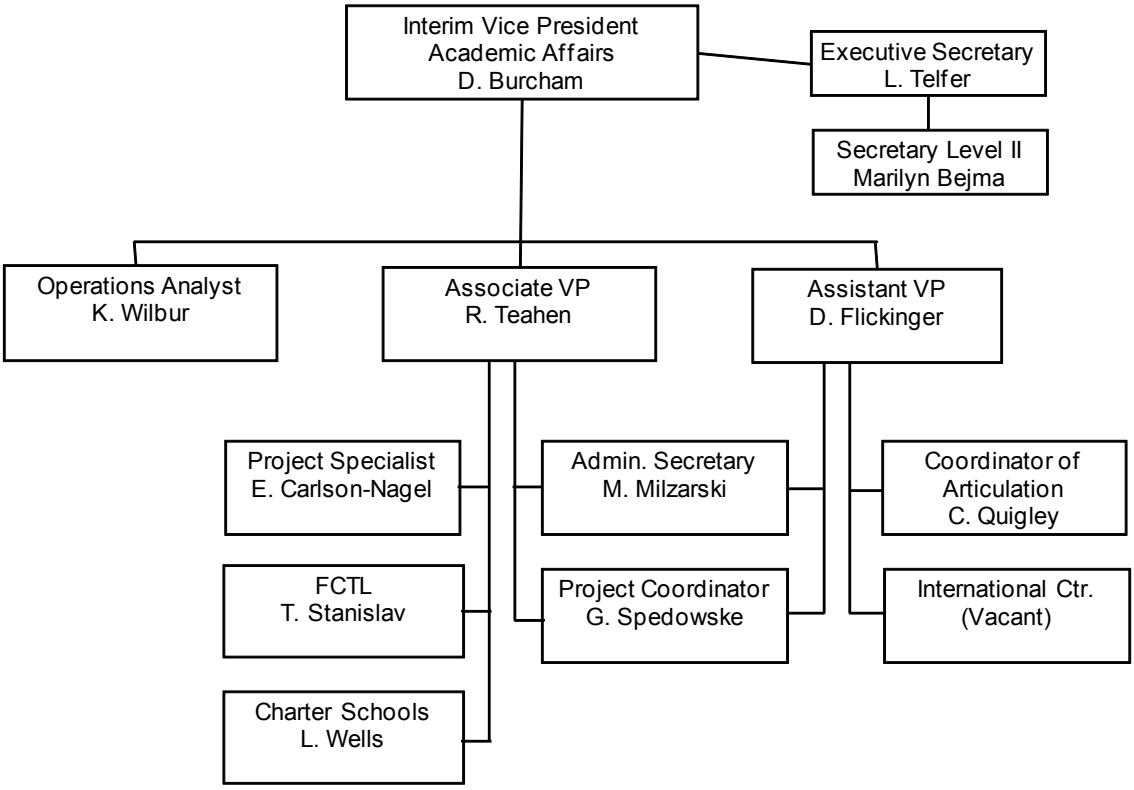
Education Unit

The Department Chair, who has ¾ release time for administrative duties, has immediate responsibility for the AET program. The Department Chair reports to the Dean of the College of Engineering Technology who reports to the Vice President of Academic Affairs who reports to the President of Ferris State University who reports to the Board of Trustees – see flow charts below.

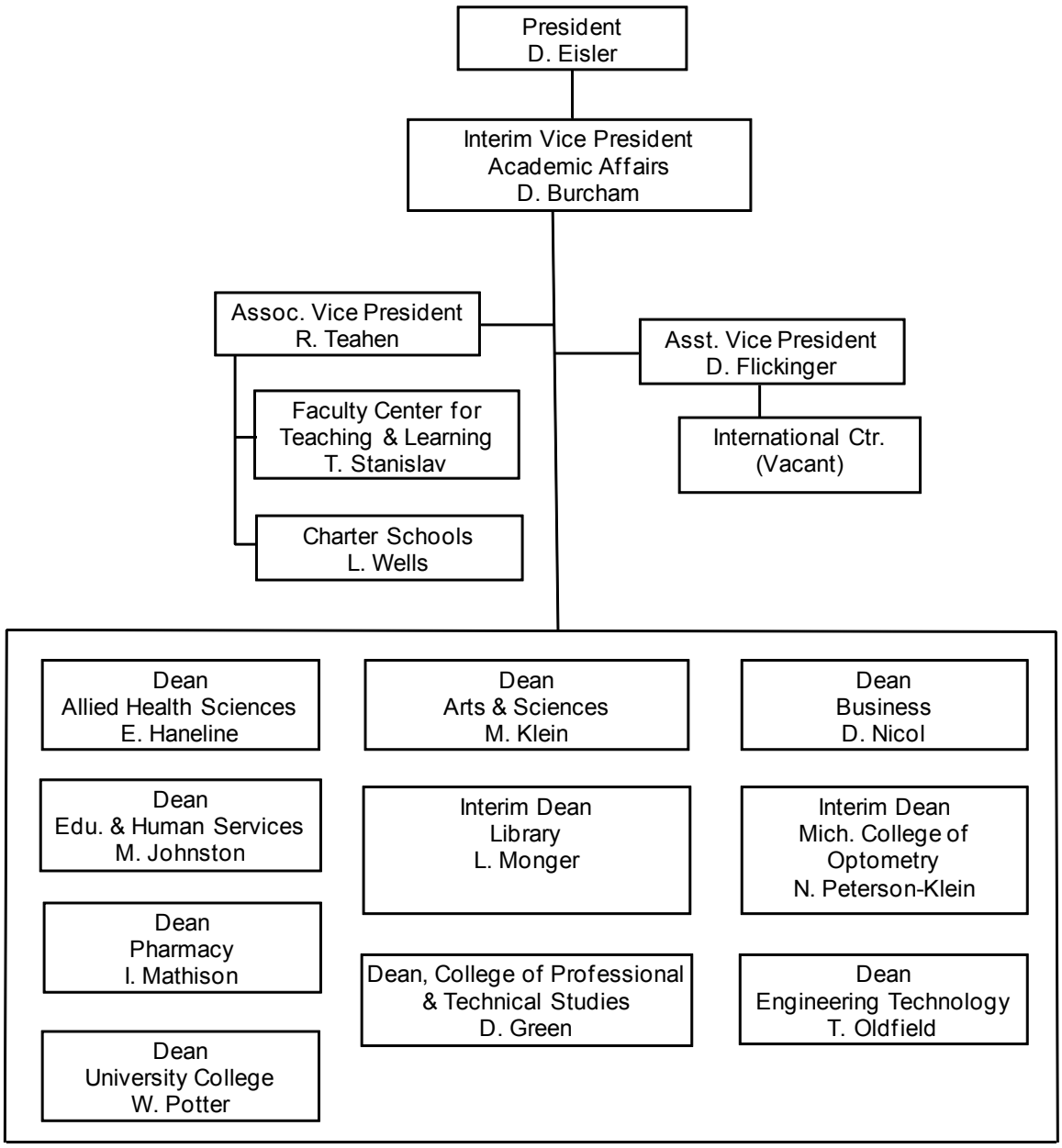




FERRIS STATE UNIVERSITY
OFFICE OF ACADEMIC AFFAIRS

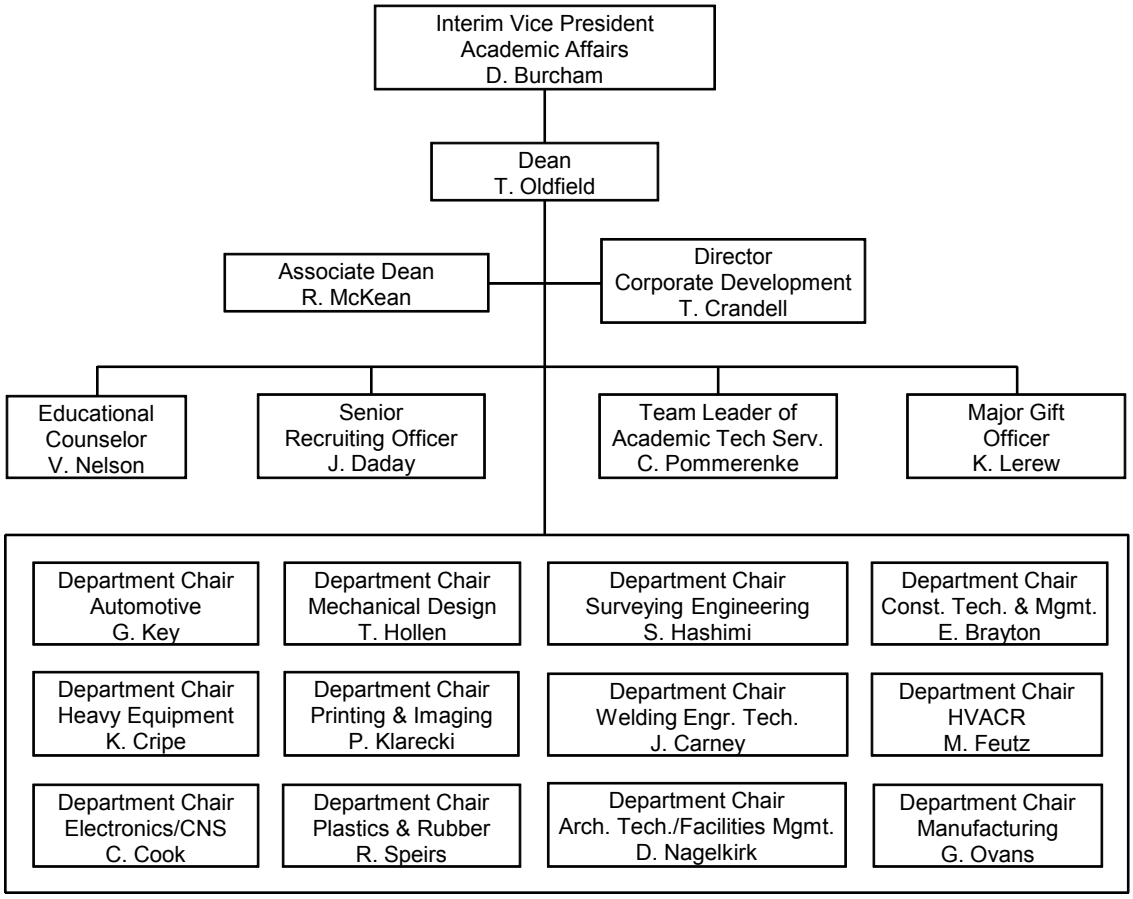


FERRIS STATE UNIVERSITY
ACADEMIC AFFAIRS DIVISION



FERRIS STATE UNIVERSITY
ACADEMIC AFFAIRS DIVISION

COLLEGE OF ENGINEERING TECHNOLOGY



CREDIT UNIT

One semester credit represents one lecture hour or one to four contact hours per week. One academic year represents 30 weeks of classes, exclusive of final examinations. All credits are expressed as semester hours.

Internships are four credit classes and require a minimum of ten weeks and 400 hours of student employment (typically over summer). Faculty load is counted as eight hours to offset additional faculty efforts.

Instructional Modes

All courses in the College of Engineering Technology programs are “traditional laboratory/lecture” form. Very few online or mixed delivery options for course instruction are available.

Grade Point Average

The following grading system and grade point values are used for all courses at Ferris State University:

A (4.0), A- (3.7), B+ (3.3), B (3.0), B- (2.7), C+ (2.3),
C (2.0), C- (1.7), D+ (1.3), D (1.0), D- (0.7), F (0.0)

Grades of CR (Credit), NC (No Credit), AUD (Audit), I (Incomplete), IP (In Progress), W (Withdrawal), and AW (Administrative Withdrawal) are not considered in computing grade point averages. Grades of WF (Withdrawal Failing) or AWF (Administrative Withdrawal Failing) are computed as a grade point value of (0.0). The minimum grade point average required for graduation is 2.0.

Academic Supporting Units

Academic Colleges

More than 170 educational programs - including doctorates, master's, bachelor's and associate degrees - are offered through the colleges of Allied Health Sciences, Arts and Sciences, Business, Education and Human Services, Optometry, Pharmacy, Professional and Technological Studies, Engineering Technology, and Kendall College of Art and Design.

Here at Ferris State University, classes are taught by professors - not graduate assistants. The great majority of those classes are taught in small groups, not big lecture halls.
. Ferris has a 98 percent job placement and students will enjoy 220 student organizations for fun in a relaxed, hometown setting in the heart of Michigan's recreation area.

Non-Academic Supporting Units

GENERAL INFORMATION

STUDENT COSTS

The average annual cost for a Michigan resident to attend Ferris (based upon 2008-09 rates) including tuition, room and board, fees, estimated academic and personal expenses, is $20,208.

2008-09 Costs	**Semester**	**Year**
Undergraduate (Michigan resident)		
Tuition (15 credit hours)	$4,500	$9,000

Room and Board (19 meal plan)	$3,972	$7,944
Sub Total	$8,472	$16,944
Books and Supplies (estimate)	$440	$1,100
Personal Expenses (estimate)	$1,001	$2,002
Refundable Fees*	$81	$162
Total Expenses (estimated)	$10,104	$20,208

*If requested, the Racquet Facility fee, Student Activity fee and Health Center fee will be deleted from the student's account. Cash refunds will only be granted for the Racquet Facility fee and the Student Activity fee if the student's account is paid in full.

2008-09 Costs	**Semester**	**Year**
Undergraduate (non-resident)		
Tuition (15 credit hours)	$7,900	$15,900
Undergraduate (non-resident MSEP)*		
Tuition (15 credit hours)	$6,750	$13,500

Part-time Student	
Michigan Resident	$300 per credit hour
Non-Resident	$530 per credit hour
Non-Resident MSEP*	$450 per credit hour
Graduate Student	
Michigan Resident	$403 per credit hour

2008-09 Costs	**Semester**	**Year**
Undergraduate (Michigan resident)		
Tuition (15 credit hours)	$4,500	$9,000
Room and board (19 meal plan)	$3,972	$7,944
Sub Total	**$8,472**	**$16,944**
Books and Supplies (estimate)	$550	$1,100
Personal Expenses (estimate)	$1,001	$2,002
Refundable Fees*	$81	$162
Total Expenses (estimate)	**$10,104**	**$20,208**

*If requested, the Racquet Facility fee, Student Activity fee and Health Center fee will be deleted from the student's account. Cash refunds will only be granted for the Racquet Facility fee and the Student Activity fee if the student's account is paid in full.

Undergraduate (non-resident)	***Semester***	***Year***
Tuition (15 credit hours)	$7,950	$15,900
Undergraduate (non-resident MSEP)*	***Semester***	***Year***
Tuition	$6,750	$13,500

Part-time Student	
Michigan Resident	$300 per credit hour
Non-Resident	$530 per credit hour
Non-Resident MSEP*	$450 per credit hour

Graduate Student	
Michigan Resident	$403 per credit hour
Non-Resident	$604 per credit hour
Non-Resident MSEP*	$604 per credit hour

Professional Tuition	***Resident***	***Non-Resident***
Pharmacy Tuition	$478 per credit hour	$718 per credit hour
Optometry Tuition	$488 per credit hour	$732 per credit hour

Family Apartment	***12 month contract***
One Bedroom	$8,254
Two Bedroom	$9,202
Two Bedroom (townhouse)	$10,050
Three Bedroom (townhouse)	$10,972
Optional Meal Plan	
Room and Board (12 meal plan)	$7,570

Other meal plans available for non-traditional and deluxe halls.

*Students are eligible for the MSEP (Midwest Student Exchange Program) rate if they live in one of the following states: Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin. This tuition-reduction program is not available for students enrolled in Doctor of Optometry, and Doctor of Pharmacy programs.

FINANCIAL AID

More than 82 percent of the students presently enrolled at Ferris State receive some type of financial aid through federal, state and Ferris programs, including scholarships, grants, loans and student employment. Ferris State University awards more than $124 million in student aid annually.

Financial aid is primarily based on financial need and is intended to assist students whose families lack the total resources needed to pay for college. Information on financial aid programs available at Ferris may be obtained by contacting the Office of Scholarships and Financial Aid at 1-231-591-2110 or via the Internet at www.ferris.edu and "Quick Link" to Financial Aid.

CAREER RESOURCES AT FSU

A Ferris State University career-oriented education is complemented by comprehensive educational planning and career counseling resources available from the Educational and Career Counseling Center (ECCC) which is staffed with licensed professional counselors. The ECCC is located on the 3rd floor of the Starr Building and provides a wide range of services for FSU students. See **http://www.ferris.edu/eccc** for more details of the services and programming offered.

STUDENT EMPLOYMENT & CAREER SERVICES

The Office of Student Employment & Career Services assists students in finding on-campus, local off-campus, internships, summer and full-time positions.

Through SE&CS, part-time employment is available to students as both on and off-campus work study, on-campus non-work study, and local off-campus and "Quick Cash" opportunities. In addition, students/alumni have access to e-Recruiting, which is a state-of-the-art internet-based software package that allows students to upload their résumés into the FSU Résumé Book database, search and apply for employment/internship opportunities and sign up for on-campus interviews. On-campus interviews take place both fall and winter semesters with approximately 150 employers participating per academic year. Students can register with e-Recruiting and view

a whole array of other career/employment-related information on our website at www.ferris.edu/careerservices.

SE&CS also provides résumé-review workshops, mock interviews, and classroom presentations. Every fall and winter the SE&CS office sponsors job fairs to assist students in finding internship and full-time positions. These job fairs are consistently some of the largest in the state. In addition, in fall semester the College of Business Internship Office, SE&CS, and University Alumni Relations, present the "Career Tactics Workshops" that allows students to enhance professional and job-search skills. Annual studies of employed alumni indicate that 91% are employed in occupations related to their major field of study at Ferris and 98% of graduates are working or continuing their education. Ninety-seven percent of graduates seeking employment found jobs. All seven colleges had a 95% or higher placement rate.

EDUCATIONAL AND CAREER COUNSELING

Every undergraduate college has educational counselors to provide information on all of their academic programs in Ferris's undergraduate colleges. These counselors are located in the colleges of Allied Health Sciences, Arts and Sciences, Business, Education & Human Services, Engineering Technology, and University College.

In addition to providing academic counseling, educational counselors in the Educational and Career Counseling Center (ECCC) located in STARR 313, help students to identify and overcome obstacles to their academic success through the identification of both learning preferences and an individual's approach to the college learning experience. ECCC also offers assistance in making career choices. While finding the right career depends on several factors, two strong influences are personality and interests. Students can receive information in these areas by completing the Myers-Briggs Type Indicator and the Strong Interest Inventory through the ECCC. A licensed counselor interprets the results with the student and provides information on careers that are aligned with the individual's personality, interests, values, and skills.

INFORMATION TECHNOLOGY SERVICES

A high-speed, wide-area network provides broad campus access to academic resources, the Internet, and other computing resources such as FLITE library. Each of the 3,000 residence hall rooms and University apartments has network connections. Every residence hall is equipped with a computer lab. In addition, there are large computing laboratories available to students in various locations on the Ferris State University campus. Student Technology Services provides installation of network cards and computer support to students for a fee. Copies of the Microsoft software Office 2003 Professional, FrontPage 2003, Windows XP Professional, Visual Studio Professional, and Office for MAC are available for a $25.00 per year blanket license fee and $10.00 per copy of the software. The University operates a Nortel Private Branch Exchange for voice services. Remote data access to the Internet and campus facilities is available for all faculty, staff, and students. Fiber optic, broadband, twisted pair, and wireless networks are utilized to provide services for voice, data, and video. Imail electronic mail is offered to students on and off campus. The Ferris Web site (http://www.ferris.edu) provides information about the University and is used to support student Web services. The University portal, My FSU, links products such as Student, Faculty, and Employee Web Services with capabilities of the Internet to create a customized campus experience. During the 2008-09 academic year, the University also adopted the use of WebEx for conferencing and Tegrity for classroom or other setting video capture.

STUDENT AFFAIRS

The division of Student Affairs provides a variety of services for students through the following departments: Birkam Health Center, Student Employment & Career Services, Counseling Center, Enrollment Services, Office of Multi-Cultural Student Services, Rankin Student Center, Student

Leadership & Activities and University Recreation. All of these departments work with students to enhance their university experience.

The Office of Student Leadership & Activities helps students use and grow their talents through campus and community involvement. To keep students involved and connected to the University, there are more than 200 registered student organizations (RSOs), including sports clubs, Greek letter organizations, spiritual groups, academic societies and professional associations. The Student Volunteer Center refers hundreds of Ferris students each year to area agencies seeking volunteers. A variety of leadership programs are offered throughout the year to help students develop marketable leadership and management skills.

ATHLETICS

The Ferris State University Bulldogs are members of the National Collegiate Athletic Association (NCAA). Varsity teams compete in the Central Collegiate Hockey Association (NCAA Division I) in ice hockey and the Great Lakes Intercollegiate Athletic Conference (NCAA Division II) in all other sports.

Ferris student athletes participate in 15 varsity sports: golf, tennis, basketball, track, cross country, softball, soccer and volleyball for women; golf, tennis, basketball, track, cross country, hockey and football for men.

INTRAMURAL AND RECREATIONAL SPORTS

Annually, more than half of the student body participates in organized recreational sports activities, including extensive intramural and club sport programs. Other students participate in informal recreation activities. Ferris provides ample facilities for athletics and recreation, including a Student Recreation Center with pool, weight room, basketball and volleyball courts and indoor track; a golf course; a sports complex including full and half-size ice rinks, additional basketball and volleyball courts; racquetball courts and indoor and outdoor tennis courts.

CULTURAL EVENTS

Concerts by Ferris State Music Center organizations such as the West Central Concert Band, Chamber Orchestra, Jazz Ensemble, Concert Choir, and Ferris Wheels (men's glee club), and productions of the University Theater are augmented by appearances of professional music, drama and dance organizations and other performing arts groups. The Ferris Art Gallery features exhibits of paintings, prints, photography, sculpture and crafts, as well as special exhibits featuring leading Michigan artists, FSU faculty and students.

The Arts and Lectures Committee offers a schedule of lectures, concerts and films, while Entertainment Unlimited and the Music Industry Management Association present pop/rock and comedy concerts and other events of a contemporary nature.

The Office of International Affairs "International Festival of Cultures" brings the world to Big Rapids with students, faculty, staff, and community members presenting cultural displays, performances, and food from more than fifty countries worldwide. Entertainment Unlimited, the campus programming board, is responsible for coordinating more than 80 student-produced events each year including comedy shows, films, novelties and live contemporary music performances. Entertainment Unlimited also programs the Student Speaker Series which brings 6-8 speakers to campus each year.* The Music Industry Management Association helps students get experience behind the scenes of producing live campus entertainment through their annual Autumn Alive Concert and Delta Chi Fraternity does the same with their annual January Jams Concert. *(Topics of these lectures range from pop culture and media to harder-hitting issues like alcohol awareness and hate crimes.)

COLLEGE OF PROFESSIONAL AND TECHNOLOGICAL STUDIES

In the early 1970s, Ferris State University opened the Office of Continuing Education on the Big Rapids, MI campus. At that time, the office focused on the development and delivery of noncredit, continuing education programs, institutes, and camps. In the late 1970s, the offering of degree programming was added to its operation and the first off-campus location was opened in Traverse City, MI.

In 1983 the unit was reorganized as the Gerholz Institute for Lifelong Learning (GILL) and then changed again in 1998 to the University Center for Extended Learning (UCEL). Other early off-campus sites included Dowagiac in 1978 and Grand Rapids that began operation in the early 1980s. The Grand Rapids location, dubbed Ferris-Grand Rapids, operated as a standalone campus and, for a short time in the late 1990s, oversaw the operations of the Dowagiac, Jackson, and Muskegon sites before oversight for those locations reverted back to UCEL.

In 1999, the College of Professional and Technological Studies (CPTS) was established on the Grand Rapids campus with the mission to serve the area through the development and delivery of academic programs that met the specific needs of that area's business, industry and the community at large.

In 2007, CPTS and UCEL operations merged to bring cohesion and economy to the operations that serve the needs of more than 5,000 off-campus and online students each year.

Today, CPTS delivers more than 50 career-focused professional development certificates, associate, bachelor, and master degrees through a network of 20 locations – all aimed toward helping students advance toward their career goals. Students, many of whom are working adults, find earning their degree convenient with classes that fit within their busy schedules. Programs are offered in direct response to needs identified in communities throughout the state, often in partnership with the local community college.

In addition to academic programming, CPTS operates the Conference and Professional Services (CPS) office. The CPS team provides conference design and development consultation services that include planning, strategy, and implementation. To help ensure that programs succeed, they assist with marketing and promotion, financial management, contracts, registration, site selection, facilities arrangements, on-site services, and evaluations. More information about the College of Professional and Technological Studies can be found online at http://cpts.ferris.edu.

CAMPUS MEDIA

Ferris offers students a variety of media, including a campus newspaper and local cable system (Channel 22). *The Torch*, which is published weekly, informs students of University news, events, and other campus-related issues. FSU-TV Cable 22 serves the campus and community with educational and public service television programming. The *FYI* is an internal newsletter published weekly for faculty and staff with limited student distribution, and the *Crimson & Gold*, published three times yearly, is aimed at keeping alumni and other key audiences informed. Some of the colleges and programs on campus also publish their own alumni publications.

CORPORATE & PROFESSIONAL DEVELOPMENT

Division of the College of Engineering Technology

Ferris State University's Corporate & Professional Development (CPD) has been involved in partnerships to help businesses and industries with solutions to training, certification, custom assessment & gap analysis, product development, grant services, and consulting/applied research needs since 1984. More than 2,000 companies have taken advantage of the skills and facilities offered for training or testing, and

over 150,000 participants in over 1,000 offered titles/projects have been served. CPD is known for its ability to partner with business and industry clients, associations, and other providers to tackle issues related to custom training, process consulting, product development, certification, and assessment. Through the establishment of custom workshops and public institutes, training and certification needs can be solved at company, state and national levels. Work is accomplished by contracting with the CPD to create the proper partnership between the company, FSU faculty and staff, outside resources and students to complete the project goals.

CPD offers custom assessment and technical training solutions to business and industry-specific problem areas, products, processes, and equipment to provide a return on investment of training dollars. Training can be delivered at the training facilities located at the main campus complex in Big Rapids, the Grand Rapids Campus, any of Ferris' Regional Centers, at the company's plant site, or company selected offsite. CPD training facilities are air conditioned and equipped with state of the industry audiovisual equipment. Computers, projection systems and related equipment may be provided and interactive television programming is possible. Training on hundreds of technical, safety & health, business, science, and supervision/leadership topics can be provided. Training may also involve participant assessment, certification, CEU's, and credit conversion as required.

With the changing world needs, CPD is investing in new offerings for the community it serves through an Energy Efficiency Center & Annual Michigan Energy Conference, as well as activities in product innovation and entrepreneurship. CPD has invested in the future of training by creating the ability for development of computer interactive training for business and industry (custom CD-ROM, interactive television or internet delivery as well as traditional lecture and application labs).

In order to keep costs down (through long term delivery methods) and keep training value high (while providing a customized training program) CPD creates custom or standard training modules. These modules utilize computer interactive theoretical training combined with hands-on applied training for a blended teaching approach. This type of training has been successfully completed for Evart Products - Textron to teach plastic injection mold operation, D-M-E Co. Inc. to teach injection mold base technology, custom automated production assembly line training for FIAMM Tech. Inc., and Rubber Processing Operator training nationally for the Rubber Manufacturers Assoc., industry- wide "Manufacturing Safety & Health training," "Binocular Indirect Ophthalmoscope" training for optometrists, and "Material Handling Safety" in the plastics industry.

New trends in industry show that the new workforce requires more technical training and employers want to pay for skill, not time-in-task. Therefore, certification tools have become an important part of CPD's offerings. Good examples of certification are: the national training and assessment program developed for the Rubber Manufacturers Association, Molding Operator training packages; international certification tools for the United Assoc. of Journeymen and Apprentice Plumbers & Pipe Fitters of the U.S., Panama, and Canada; national certification for the Electrical Generating Systems Assoc.; as well as many custom certifications for private industries. In the area of grant writing services, CPD has been successful in helping gain support for industrial and business projects through state Economic Development Job Training, Michigan Works Incumbent Worker, Small Business Investment Research and Michigan Dept. of State grants. In the past ten years, CPD has managed over $3.25 million in grants. Through the State Workforce Commission-Economic Development Job Training Grants, eighteen companies have obtained a total of over $1,488,000 in grants to provide needed training to upgrade their workforce. The providing of delivery services has also been completed in partnership with many community college held grants.

Corporate & Professional Development provides custom and institute-based training and certification; grant writing services, computer interactive training, applied research, manufacturing consulting, and assessments to meet the needs of business and industry.

CPD can also assist businesses, industries, and individuals in the development and refinement of new product/process ideas. Third party validation studies can be performed to prove client claims on their products.

The Corporate & Professional Development Center is located at 1020 Maple Street, Building Suite 101. Phone 231-591-5819, Toll free 866 -880-7674, Fax 231-591-3539. Website www.ferris.edu/cpd

FERRIS LIBRARY FOR INFORMATION, TECHNOLOGY, AND EDUCATION (FLITE)

The Ferris Library for Information, Technology and Education (FLITE) opened on March 12, 2001, as a premier research facility integrating modern technology with traditional information resources. Designed for flexibility and versatility, FLITE continues to adapt to the world's advancing digital age. The Library houses 195 public computers (including thirteen Macintosh computers), approximately 1,000 ports to accommodate laptop access and future expansion, wireless connectivity, seating for 1,300 visitors, and 55 individual and group study rooms. Among its customer-service-oriented attributes, FLITE contains an extended hours study area, a family study room for visitors accompanied by children, and a food court with vended beverages and snacks. Students using FLITE have access to laptop computers and multimedia equipment including scanners, CD burners, video-editing software, and digital cameras. An adaptive technologies laboratory facilitates the learning and research of students requiring special accommodations.

FLITE serves as a gateway to a variety of information resources available both on-site and off campus in print and digital formats. FLITE houses a collection of more than 350,000 volumes and provides access to 119 online databases and more than 28,000 journal titles, either in print or digital format. As a Federal Depository Library for U.S. Government Documents and a Patent and Trademark Depository Library, FLITE offers users access to vast amounts of government information. The Library's online catalog as well as many of the University's digital resources are available through the Library's Website at http://www.ferris.edu/library/. Interlibrary loan and document delivery services are offered to all faculty, staff, and students, including distance education students, allowing users access to an immeasurable number of additional resources.

Faculty, staff, and students can receive help using these resources by phone, email, or real-time chat reference service, submitting electronic forms via the Website, or in-person at the Reference Desk in FLITE. Students and faculty can also request reference and research assistance from subject specialist librarians.

FLITE takes full advantage of advanced technologies to expand opportunities for teaching and learning. The Library contains three instructional studios equipped with 20 to 30 computer stations, an instructor's workstation, sound and projection equipment, TV/VCR, and DVD.

Additional equipment such as smart boards, laptop computers, and wireless microphones are available upon request. The instructional studios allow librarians and other faculty to teach the information seeking and critical thinking skills necessary to evaluate the burgeoning mass of available information resources. The information literacy program starts with the basics in the Ferris State University Seminar (FSUS) courses and provides instruction in library use and research to classes upon request of instructors. In addition to instructional studios, FLITE also contains six seminar rooms of various sizes to accommodate library instruction classes, meetings, and professional development activities.

FLITE also houses the Media Production Center and the Faculty Center for Teaching & Learning. Along with traditional library services, these units represent a broad spectrum of information and instructional resources. The three units work collaboratively to provide faculty with one-stop access to information specialists and media development personnel who can assist in locating information for course content and creating instructional materials in a variety of multimedia formats.

GENERAL INFORMATION
POINTS OF INTEREST

Ferris Library for information, Technology, and Education (FLITE)

2007-2008 Statistics

Services – July 2007 to June 2008

Hours open	99.5/week
Door count	489,460
Average daily attendance	1,466
Circulation (not including reserves)	26,433
Reserve circulation	5,997
Study room checkouts	25,868
Seminar room booking	2,574
Library instruction sessions	434
Reference questions	5,999
Interlibrary borrowing	8,696
Interlibrary lending	9,094
Titles catalogued	13,564

Access/Holdings – July 2008

Total print volumes (books and bound journals)	351,738
Periodical subscriptions (print and microform)	833
Periodical titles available electronically	36,517
Catalogued electronic books	58,798
Information resource databases	131
New monograph titles purchased	3,682
Archival holdings in FLITE (linear feet)	16.5
Archival holdings stored off-site (linear feet)	3,800
Public computers (includes 13 Macs)	195

(Source: LIB)

KENDALL COLLEGE OF ART AND DESIGN OF FERRIS STATE UNIVERSITY

Kendall College of Art and Design began in 1928 through a generous endowment provided by Helen M. Kendall as a memorial to her husband. David Wolcott Kendall, known as the Dean of American Furniture Designers. Helen Kendall envisioned a school whose graduates would be leaders in the world of art and design, and throughout history. Kendall College of Art and Design has prepared generations of students for careers as professional artists and designers. In addition, Kendall College of Art and Design is an active partner with the community, annually providing more than 2,000 children and adults with the opportunity to pursue courses in art and design through one of the richest and now varied continuing studies programs in the United States.

In 1996, the Board of Trustees of Kendall College of Art and Design voted to merge Kendall with Ferris State University, a process that was completed in December 2000. In combining these two distinctive institutions, the Boards of both Kendall and Ferris have forged a union that offers students the educational opportunities and strengths of each institution.

The mission of Kendall College of Art and Design of Ferris State University is to educate its students to be leaders in the arts by nurturing creative and intellectual excellence, to promote in its students an awareness of social responsibility, to provide a dynamic professional environment, to move the institution toward national prominence, and to support institutional integrity through resource development.

As part of Ferris State University, Kendall College of Art and Design is accredited by:

The Higher Learning Commission
of the North Central Association of Colleges and Schools
30 North LaSalle Street, Suite 2400
Chicago, IL 60602
800.621.7440

Kendall College of Art and Design of FSU is an accredited Institutional member of:

The National Association of Schools of Art and Design
11250 Roger Bacon Drive, Suite 21
Reston, VA 22090
703.437.0700

Kendall's Interior Design program is accredited by:

The Council for Interior Design Accreditation
60 Monroe Center NW
Grand Rapids, MI 49503-2920
616.458.0400

Kendall College of Art and Design of Ferris State University is authorized under the laws of the State of Michigan to grant:

Bachelor of Fine Arts in:
Art Education with K12 Art Education Certification
Digital Media-Digital Illustration, 2D Animation 3D Animation, Motion Graphics, or Interactive Design
Fine Arts-Drawing, Painting, Photography, Printmaking, Sculpture, or Woodworking/Functional Art
Furniture Design
Graphic Design
Illustration
Industrial Design
Interior Design
Metals/Jewelry Design
Painting
Photography
Sculpture/Functional Art

Bachelor of Science in:
Art History-Studio Academic

Master of Art Education
Master of Fine Arts in:
Drawing
Painting
Photography
Printmaking

HOUSING

Ferris State University residence halls provide environments that are clean, comfortable, safe and conducive to support the academic mission of the University. Living in the residence halls enhances the classroom learning that takes place at the University.

Through exposure to other points of view, experiencing diverse populations, and living in a community, residents learn coping skills and experiment with responsible decision-making in a safe environment.

A variety of housing and dining options exist to allow students the opportunity to create the environment in which they feel most comfortable. Services include computer labs in three halls and Ethernet connectivity in each residence hall room, a choice of private rooms, health, wellness and substance-free living, the first-year experience and other themed housing opportunities. Cable television is provided in each room with access to numerous channels including movie channels. Washers and dryers are located on virtually every floor.

Students are provided telephones with individual long-distance access codes for personalized billing of long-distance charges. Local and campus calling is free. Mail is delivered to each residence hall lobby and express delivery, flowers and packages are delivered to the hall front desk. Board games, large screen televisions and hall-sponsored activities are available in each residence hall lobby. A laser printer is available via the network from student's rooms.

Living in the residence halls is an educational endeavor. Professional and student paraprofessional hall staffs are trained to provide social and educational programming aimed at building cohesive communities on each floor called "houses." While hall staff is in place to assist in maintaining community standards, assist students in their transition to college, provide individual assistance as needed as well as making referrals to appropriate campus\resources, residents are reminded that maintaining community standards is a shared responsibility by all. As a member of a community, each resident is expected to adhere to community standards and take steps to maintain the positive community atmosphere most suited for academic excellence. Students are encouraged to take an active role in the governance of their living environments, including making decisions regarding the use of social activity funds. In addition, student governance in the residence halls helps shape residence hall policy and provides a means by which student opinions can be heard. Leadership experience gained through these opportunities proves invaluable to future employers. Residents are also provided challenges aimed at personal growth and development. Learning to live in a diverse environment provides supplemental education aimed at full preparation for life after college.

The University apartments consist of the west campus townhouses, and the east and south complexes. The west campus complex has 150 two bedroom and 50 three bedroom unfurnished townhouses which are designed to provide a neighborhood atmosphere for all students. Fully accessible townhouses are also available for students with disabilities in which the entire living area is on the ground floor, including laundry facilities.

The east and south complexes consist of 188 traditional one and two bedroom units. They are designed for single students and have laundry facilities in each building.

All apartments are within walking distance to classes and provide computer network connections to access the Internet, library and the University mainframe. Telephone and cable television connections are also provided. A community center in the center of the west campus complex houses a computer lab, meeting rooms and a large multipurpose room where educational, social community and children's programs are held.

Faculty Workload

A full-time load is considered 12 credit hours or 18 contract hours per semester (24 credits or 36 contact hours per academic year). The faculty Workload is determined by the Vice President of Academic Affairs policy letter below.

ANNUALIZED WORKLOAD
FOR INSTRUCTIONAL FACULTY:
July 25, 2007

98:1 REVISED

1. All examples will be based on a standard workload of 24 semester hours per academic year, excluding summer (recognizing the differences between colleges and between departments within colleges, 24 hours shall neither be a minimum nor a maximum).
2. No more than two-thirds (2/3) of an annual workload will be assigned in any one semester unless the member agrees. On a semester hour basis, where 24 hours is the standard workload, sixteen (16) semester hours would be two-thirds (2/3 of an annualized load.
3. A member with a full workload, including released time, may teach a maximum of five (5) overload credit hours per semester under this policy.
4. If the department head/chair can document to the dean that a faculty member in his or her college will be assigned and has agreed to teach an overload in the fall semester and will have a full load or an overload in the spring semester, the fall overload will be paid during the fall semester.

Table D-1 Programs Offered by the Educational Unit
& Table D-2 Degrees Awarded and Transcript Designations by Educational Unit

(Note: these tables are combined.)

Departments	Dept. Chairs	Degree Offered	Current Accreditation/ Certification	Submitted for Evaluation	Modes Offered		
					Day	Off Campus	Online
Architectural Technology and Facility Management	Diane Nagelkirk						
		BS – Facility Management	IFMA		X		X
		AAS – Architectural Technology	None		X		
Automotive	Greg Key						
		BS – Automotive Engineering Technology	TAC-ABET	√	X		
		BS – Automotive Management	None		X	X	
		AAS – Automotive Service Technology	NATEF		X		
Construction Technology and Management	Ed Brayton						
		BS – Construction Management	ACCE		X	X	
		AAS – Building Construction Technology	None		X		
		AAS – Civil Engineering Technology	None		X		
Electrical/Electronics and Computer Networks & Systems	Clare Cook						
		BS – Computer Network & Systems	None		X		
		BS – Electrical/Electronics Engineering Technology	TAC-ABET	√	X		
		AAS – Industrial Electronics Technology	None		X		
Heavy Equipment	Keith Cripe						
		BS – Heavy Equipment Service Engineering Technology	AEDF		X		
		AAS – Heavy Equipment Technology	NATEF		X		
Heating, Ventilation, AC & Refrigeration	Mike Feutz						
		BS – HVACR Engineering Technology	None		X		X
		AAS – HVACR Technology	None		X		
Manufacturing	Gary Ovans						
		BS – Manufacturing Engineering Technology	None		X	X	
		BS – Quality Engineering Technology	None			X	
		AAS – Manufacturing Tooling Technology	None		X		

Departments	Dept. Chairs	Degree Offered	Current Accreditation/ Certification	Submitted for Evaluation	Modes Offered		
					Day	Off Campus	Online
Mechanical Design	Tom Hollen						
		BS – Mechanical Engineering Technology	TAC-ABET	√	X		X
		BS – Product Design Engineering Technology	None		X	X	
		AAS – CAD Drafting/Tool Design	None		X		
		AAS – Mechanical Engineering Technology	TAC/ABET	√	X		
Plastics and Rubber Engineering Technology	Robert Speirs						
		BS – Plastics Engineering Technology	None		X		
		BS – Rubber Engineering Technology	None		X		
		AAS – Plastics Technology	None		X		
		AAS – Rubber Technology	None		X		
Printing and Imaging Technology Management	Pat Klarecki						
		BS – New Media Printing and Publishing	ACCGC		X		
		BS – Printing Management	ACCGC		X		
		AAS – Printing & Digital Graphic Imaging Technology	ACCGC		X		
Surveying Engineering	Sayed Hashimi						
		BS – Surveying Engineering	EAC-ABET		X		
		AAS – Surveying Technology	None		X		
Welding Engineering Technology	Jeff Carney						
		BS – Welding Engineering Technology	TAC-ABET		X		
		AAS – Welding Technology	None		X		

Table D-3. Support Expenditures

Automotive Engineering Technology

Fiscal Year	2007/2008 FY08 (previous year)[1]	2008/2009 FY09 to date (current year)[2]	(year of visit)[3]
Expenditure Category			
Operations (not including staff)[4]			
Travel[5]	$15,556.38	$4,035.70	
Equipment[6]	$118,696.59	$61,078.88	
(a) Institutional Funds			
(b) Grants and Gifts[7]			
Graduate Teaching Assistants			
Part-time Assistance[8] (other than teaching)			
Faculty Salaries	$728,514	$762,704	$762,704

Report Department Level and Program Level data for each program being evaluated. Updated tables are to be provided at the time of the visit.

1 Provide the statistics from the audited account for the fiscal year completed year prior to the current fiscal year.

2 This is your current fiscal year (when you will be preparing these statistics). Provide your preliminary estimate of annual expenditures, since your current fiscal year presumably is not over at this point.

3 Provide the budgeted amounts for your next fiscal year to cover the fall term when the ABET team will arrive on campus.

4 Categories of general operating expenses to be included here.

5 Institutionally sponsored, excluding special program grants.

6 Major equipment, excluding equipment primarily used for research. Note that the expenditures (a) and (b) under "Equipment" should total the expenditures for Equipment. If they don't, please explain.

7 Including special (not part of institution's annual appropriation) non-recurring equipment purchase programs.

8 Do not include graduate teaching and research assistant or permanent part-time personnel.

Table D-4. Personnel and Students

AUTOMOTIVE DEPARTMENT*
FALL 2008

	Head Count			
	Full-Time	Part-Time	FTE	Ratio to Faculty
Administrative - Chair	0.75		0.75	
Faculty (tenure track)	13.25		12.97	
Faculty (adjunct)	1.00		1.00	
Student Teaching Assistants	0		0	-
Student Research Assistants	0		0	-
Technicians	1.00		1.00	0.02
Office/Clerical	2.00		2.00	0.14
Student Enrollment -BS AET	149	11	158	
Student Enrollment -AAS AST	69		69	
Student Enrollment -BS AMGT	69	26	75.93	
Student Enrollment -pre AET	4		4	
Student Enrollment -pre AST	6		6	
Student Enrollment -pre AMGT	7		7	
Student Enrollment - TOTAL	304	37	319.93	22.90

*One faculty serves as chair with .75 FTE release time for administrative work.
(est. 4cr/part or 4/15 time AMGT student)

AUTOMOTIVE ENGINEERING TECHNOLOGY
FALL 2008

	Head Count			
	Full-Time	Part-Time	FTE	Ratio to Faculty
Administrative - Chair	0.75		0.75	
Faculty (tenure track)	10.25		9.78	
Faculty (adjunct)	1.00		1.00	
Student Teaching Assistants	0		0	-
Student Research Assistants	0		0	-
Technicians	1.00		1.00	0.09
Office/Clerical	2.00		2.00	0.17
Student Enrollment (all)	149	11	158	15.61

*All faculty associated with AET courses are included teaching AET in the BS AET program. Since the FTE here also reflects Auto Service program courses, the student: faculty FTE are actually higher for BS AET. One faculty serves as chair with .75 FTE release time for administrative work.

Report data for the program unit(s) and for each program being evaluated.

[1] Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.

[2] For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc. For faculty members, 1 FTE equals what your institution defines as a full-time load.

[3] Divide FTE in each category by total FTE Faculty. Do not include administrative FTE.

[4] Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.

[5] Specify any other category considered appropriate, or leave blank.

[6] Specify whether this includes freshman and/or sophomores.

Table D-5. Program Enrollment and Degree Data

Automotive Engineering Technology

Academic Year		Enrollment Year					Total Undergrad	Total Grad	Degrees Conferred			
		1st	2nd	3rd	4th	5th			Bachelor	Master	Doctor	Other
CURRENT	FT											
2009/2010	PT											
1	149 FT	21	32	48	48		149					
2008/2009	11 PT						11					
2	150 FT	20	20	61	49		150		37			
2007/2008	5 PT						5					
3	92 FT	16	20	31	25		92		23			
2006/2007	5 PT						5					
4	72 FT	2					72		28			
2005/2006	6 PT						6					
5	66 FT	0					66					
2004/2005	8 PT						8					

Give official fall term enrollment figures (head count) for the current and preceding five academic years and undergraduate and graduate degrees conferred during each of those years. The "current" year means the academic year preceding the fall visit.

FT--full time
PT--part time

Table D-6. Faculty Salary Data[1]

Automotive Engineering Technology

Academic Year 2009

	Professor	Associate Professor	Assistant Professor	Instructor
Number	4	3	4	None
High	84,801	66,834	60,264	
Mean	82,438	64,899	59,564	
Low	78,773	63,794	59,131	

[1] If the program considers that this information to be confidential, it can be provided only to the Team Chair.