

WSU Five-Year Program Review Self-Study

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Department/Program: Engineering Technology/Electronics Engineering
Technology

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A. Brief Introductory Statement

This five year program review self-study is for the Electronics Engineering Technology program which is in the Department of Engineering Technology in the College of Applied Science and Technology. The study is based upon the self-study for ABET as the program will be undergoing reaccreditation review by ABET in fall of 2015. The program has two major emphases consisting of embedded systems and electronic control systems. The program provides courses for its own majors as well as service courses for the manufacturing and mechanical engineering technology programs.

Program faculty members are teaching very heavy loads because of the inability to hire more full-time faculty, the requirement to support other programs, and the lack of qualified adjunct faculty available to teach during the day. These loads generally prevent the faculty from appropriately fulfilling other aspects of their employment, namely scholarship and service.

B. Mission Statement

The Electronics Engineering Technology Program (EET) provides applications-oriented education which prepares graduates to make significant contributions in electronics-based career fields. The Bachelor of Science degree program in EET prepares students to incorporate computer and electronic systems in the design, application, installation, and implementation of electrical and electronic systems. EET program graduates have acquired the skills and knowledge necessary to solve engineering, technology, science and manufacturing challenges in a variety of technical fields. The Associate of Applied Science degree program in EET prepares graduates for building, testing, operating, and maintaining electrical and electronic systems. The program also offers a minor in EET.

Both the AAS and BS degree programs emphasize the importance of students becoming and remaining competent in their chosen career, the need for continual improvement and application of new technologies, and the need to become active contributing members of society with an understanding of their professional and ethical responsibilities. The program works to advance knowledge in the discipline through scholarly activities including instructional improvement, applied research and transfer of technology. The program also strives to serve the students of the College of Applied Science and Technology and the University in addition to the business and industrial communities of Utah and the intermountain region.

C. Curriculum - Curriculum Map

I = Introduced R = Reinforced E = Emphasized	Department/Program Learning Outcomes										
	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4	Learning Outcome 5	Learning Outcome 6	Learning Outcome 7	Learning Outcome 8	Learning Outcome 9	Learning Outcome 10	Learning Outcome 11
Core Courses in the Program											
EET 1110 Basic Electronics	I										
EET 1130 Digital Systems	I										
EET 1140 DC Circuits		I		I							
EET 2010 AC Circuits	R			I							
EET 2110 Semiconductor Devices	I										
EET 2120 Power and Motors	R			R		R					
EET 2130 PC Board Design	R			R		R					
EET 2140 Communication Systems I	R			R							
EET 2150 Embedded Controllers		I		R							
EET 2160 Troubleshooting		R				R					
EET 2170 Real-Time Embedded Controllers	I										
EET 3010 Circuit Analysis	I		R								
EET 3040 Instrumentation and Measurements	I		R								
EET 3090 Project Management	R		R								
EET 4010 Senior Project I	I										
EET 4020 Senior Project II	E					R					
EET 4030 Controls and Systems	I										
EET 4060 Communication Systems II					R	E	R	E	R		E
EET 4090 System Design and Integration					R	E	R	E	R		E
EET 4xxx Alternative Energy Systems			I								

I = Introduced R = Reinforced E = Emphasized	Department/Program Learning Outcomes										
	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4	Learning Outcome 5	Learning Outcome 6	Learning Outcome 7	Learning Outcome 8	Learning Outcome 9	Learning Outcome 10	Learning Outcome 11
Core Courses in the Program											
EET 4890 Cooperative Work Experience											
Technical Electives											

Summary Information (as needed)

D. Student Learning Outcomes and Assessment

Measureable Learning Outcomes

At the end of their study at WSU, EET students will have attained the ability to:

1. Select and apply the knowledge, techniques, skills, and modern tools of the discipline in the design application, installation, and implementation of electrical and electronic systems.
2. Select and apply a knowledge of mathematics, science, engineering, and technology to industrial automation, digital systems and microcontrollers, communications and signal processing to develop practical solutions for engineering technology problems.
3. Conduct, analyze and interpret experiments and apply experimental results to improve processes.
4. Design systems, components, or processes as related to electrical and electronic systems.
5. Function effectively as a member or leader on a technical team.
6. Identify, analyze, and solve broadly-defined problems through analysis and experimentation leading to modification of systems, components and processes.
7. Communicate effectively in written, oral, and graphical forms in both technical and non-technical environments and to identify and use appropriate technical literature.
8. Develop an understanding of the need for and to engage in self-directed continuing professional development.
9. Develop an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
10. Develop a knowledge of the impact of engineering technology solutions in a societal and global context
11. Have a commitment to quality, timeliness and continuous improvement.

Evidence of Learning: Courses within the Major

Assessment Schedule - Assessment will be performed on the following tracks once every three years.

2012-2013

Analog

EET 1110

EET 1140

EET 2110

EET 2130

EET 3010

EET 4030

EET 4060

2013-2014

Digital

EET 1130

EET 2150

EET 3060

EET 4040

2014-2015

Other

EET 2120

EET 2170

EET 3040

EET 3090

EET 4010

EET 4020

EET 4090

EET 4800

EET 4890

EET 4900

Evidence of Learning: Courses within the Major (for most recent year assessed)					
Measureable Learning Outcome	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
1. Select and apply the knowledge, techniques, skills, and modern tools of the discipline	1. Course Exams	Measure 1: 70% of students will score above 75%	Measure 1: EET 1110: 70% EET 1140: 73%	Measure 1: Students successfully demonstrated technical ability.	Measure 1: No change required.
	2. Exit Exam	Measure 2: 70% of students will score above 75%	Exit Exam is in development. The program may elect to use the SME Exam		
2. Select and apply a knowledge of mathematics, science, engineering, and technology to develop practical solutions for engineering technology problems	1. Exit Exam	Measure 1: 70% of students will score above 75%	Exit Exam is in development. The program may elect to use the SME Exam		
	2. Course Exams	Measure 1: 70% of students will score above 75%	EET 2110: 71% EET 3010: 70% EET 4030: 100% EET 4060: 100%	Measure 1: Students demonstrated the ability to select and apply knowledge of mathematics, science, engineering, and technology AC and DC circuits, assessed through homework and exam problems. (2013) Lower percentages in EET 2110 and EET 3010 reflect deficiencies in math aptitude.	Measure 1: Implementation of a departmental exit exam in addition at the sophomore and junior levels for aggregate assessment. (2013) Lower percentages in EET 2110 and EET 3010 reflect deficiencies in math aptitude. Emphasis is being placed on higher level math skills as prerequisites for these courses.

Evidence of Learning: Courses within the Major					
Measureable Learning Outcome	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
3. Conduct, analyze and interpret experiments and apply experimental results to improve processes	1. Laboratory Reports	Measure 1: 70% of students will score above 75%	EET 1140: 69% EET 2110: 93%	Measure 1: students demonstrated the ability to conduct standard tests and measurements through lab exercises where they conduct, analyze, and interpret experiments. (2013)	Measure 1: Change required. Students missed the lab exam which greatly affected their final lab grade. A make-up exam will be offered next year. (2013)
4. Design systems, components, or processes as related to electrical and electronic systems.	1. Grading Rubric for EET 2130	Measure 1: 75% of students will score above 75% on the prototype circuit and the final PCB design.	Measure 1: EET 2130: 85%	Measure 1: Students demonstrated the ability to design an electronics circuit used in the fabrication of an original microprocessor based PCB project. (2013)	Measure 1: no change required (2013)
	2. Senior Project Evaluations	<u>TBD</u>			

Evidence of Learning: Courses within the Major					
Measureable Learning Outcome	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
5. function effectively as a member or leader on a technical team	1. Rubric and team evaluations	Measure 1: 75% of students will score above 70%	Measure 1: EET 2130: 85%	Measure 1: Students demonstrated their ability as an effective team member assessed by the instructor and by team members. (2013)	Measure 1: no change required. (2013)
	2. Senior Project Evaluations – teamwork rubric	<u>TBD</u>			
	3. Surveys; employer&student	<u>TBD</u>			
6. identify, analyze, and solve broadly-defined problems through analysis and experimentation leading to modification of systems, components and processes	Measure 1: Exam	Measure 1: 75% of students will score above 70%	Measure 1: EET 1140: 82% EET 2110: 71% EET 3010: 70% EET 4030: 100% EET 4060: 100%	Measure 1: Students demonstrated the ability to identify, analyze, and solve problems with electronic circuits/systems on homework and exam problems. Lower percentages in EET 2110 and EET 3010 reflect deficiencies in math aptitude. (2013)	Measure 1: Lower percentages in EET 2110 and EET 3010 reflect deficiencies in math aptitude. Emphasis is being placed on higher level math skills as prerequisites for these courses. (2013)
	1. Senior Project Evaluations				
	2. Surveys (employer and student)				

Evidence of Learning: Courses within the Major					
Measureable Learning Outcome	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
7. Communicate effectively in written, oral, and graphical forms	1. Senior Project Evaluations – writing rubric	<u>TBD</u>			
	2. Senior Project Evaluations – presentation rubric	<u>TBD</u>			
	3. Surveys (employer and student)	<u>TBD</u>			
8. develop an understanding of the need for and to engage in self-directed continuing professional development	1. Senior Project Evaluations	<u>TBD</u>			
	2. Surveys (employer and student)	<u>TBD</u>			

Evidence of Learning: Courses within the Major					
Measureable Learning Outcome	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
9. develop an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	1. Senior Project Evaluations	<u>TBD</u>			
	2. Surveys (employer and student)	<u>TBD</u>			
10. develop a knowledge of the impact of engineering technology solutions in a societal and global context	1. Senior Project Evaluations	<u>TBD</u>			
	2. Surveys (employer and student)	<u>TBD</u>			
11. Have a commitment to quality, timeliness and continuous improvement.	1. Senior Project Evaluations	<u>TBD</u>			
	2. Surveys (employer and student)				

E. Academic Advising

Advising Strategy and Process

All Electronics Engineering Technology students are required to meet with a faculty advisor at least annually for course and program advisement. Students may call 801-626-6305 for more information or to schedule an appointment. Advisement may also be obtained in Engineering Technology, room 214.

Effectiveness of Advising

The current advisement process appears to be effective as there are very few issues concerning wrong advising. Advising as done in the program covers both career guidance and what courses students need to be taking.

Past Changes and Future Recommendations

There currently are no plans to change the current advising process.

F. Faculty

Faculty Demographic and Diversity Information

The Electronics Engineering Technology program currently has three full-time faculty members and approximately 3 adjunct faculty who teach part-time. The number of adjuncts varies by semester and is included in the subcategory on adjuncts.

Main Categories	Subcategories	Number
Gender	Male	2
	Female	1
Ethnicity	Euro-American	3
Degree	Master's	1
	Ph.D.	2
	Bachelors	0
Rank/Tenure	Tenured	1
	Tenure Track	2
	Adjunct	2-3
Year Teaching (WSU)	<5	2
	5-20	1

Programmatic/Departmental Teaching Standards

All faculty in the College are expected to be good teachers. Where there is a perceived weakness in a faculty member's teaching, they are counseled by a mentor, encouraged to attend the on-campus presentations on teaching, and in some cases have been sent to national conferences specific to teaching. All non-tenured faculty are required to have all classes taught evaluated by students. Tenured faculty are required to have one course each semester evaluated to maintain our focus on acceptable teaching.

Faculty Qualifications

To be tenured or be hired on tenure track, faculty must meet one of the two following requirements:

1. Attainment of the earned doctorate in a field applicable to electronics engineering technology and three years of full-time industrial experience.
2. Attainment of a master's degree in a field applicable to electronics engineering technology and five years of full-time industrial experience.

Adjunct faculty must have a degree in Electronics Engineering Technology or its equivalent or in a related field and be currently active in the content area in which they are teaching.

Evidence of Effective Instruction

- i. Regular Faculty
Tenure-track faculty members are evaluated each semester for every class they teach. Tenured faculty members are evaluated in at least one class each semester they teach. Any concerns arising from this evaluation are discussed with the department chair.
- ii. Adjunct Faculty
Adjunct faculty members are evaluated each semester for every class they teach. Any concerns arising from this evaluation are discussed with the department chair.

Mentoring Activities

Faculty are mentored by the program coordinator and by the program chair. Faculty mentors also work with adjunct faculty to improve their teaching and to assist with classroom issues such as testing, syllabi, online, cheating, and classroom discipline.

Ongoing Review and Professional Development

Tenure-track faculty are reviewed informally once a year by the department chair and formally during their third and sixth years. Tenured faculty members are reviewed every three years by the department chair.

Faculty members are provided opportunities for professional development in areas of instruction, scholarship, and service. This includes taking professional courses, attending and/or presenting at professional conferences, and participating in research and scholarly discussion groups on campus. In addition, all faculty are encouraged to submit proposals to the Research Scholarship and Professional Growth Committee and the Academic Resources and Computing Committee.

G. Support Staff, Administration, Facilities, Equipment, and Library

Adequacy of Staff

The department has one and a half technicians, one secretary, and one student aide that are shared among all of the programs. This number of staff is adequate to meet the needs of the program.

H. Ongoing Staff Development

Staff are encouraged to seek professional development where appropriate and have attended conferences off-campus and out-of-state paid for by the College.

Adequacy of Administrative Support

While the operating budgets are adequate to support the program, there is no capital equipment budget in the College. Therefore acquisition of new equipment is dependent upon other sources of funding which can be problematic. In addition, there is a definite lack of support for hiring new faculty which requires the faculty in the program to teach overloads thus reducing their time to participate in scholarly activities or service.

Adequacy of Facilities and Equipment

In June 2014, Weber State University demolished Building Four which housed laboratories and facilities for both the EET and EE programs. All existing laboratory facilities and both the EET program and the EE Department were displaced for approximately two and a half years. Through a collaborative effort led by the Dean and the Department Chair, the Engineering Technology department has adapted and modified existing space within the ET Building to create several electronic and computing laboratories.

The Engineering Technology department has a cross-discipline automation laboratory to support EET, MFET, and MET classes. In addition, two electronics

laboratories have been created (ET 101A and B) with a total of twenty two stations. Each station can support a two-student team and includes power supplies, multimeters, an oscilloscope, a function generator, and a desktop computer with circuit simulation software (MULTISIM). Additional laboratories exist for computer-aided design work which includes MATLAB/SIMULINK, and National Instruments LabVIEW software.

The current laboratory facilities and resources are adequate to support the academic requirements of the program. However the building is currently operating at full capacity. Laboratory space for senior project and faculty research will be required for future growth in support of scholarly activities.

Adequacy of Library Resources

The library resources are adequate to support the program.

I. Relationships with External Communities

Description of Role in External Communities

The program has a strong and ongoing relationship with the external community, particularly with the companies that employ its graduates. A partial list of employers the program interfaces with is shown below:

Austral-Star LLC*
ATK
Autoliv
Barnes Aerospace Ogden Division
Boeing
Brilliant-Integrated Technologies
Design Criteria, Inc.*
FAA*
FMC*
Gardner Alternative Engineering
L3 Communication
Moog*
Northrop Grumman
PowerTeq
Varian*

* Companies with current members on the Industrial Advisory Committee – See Appendix E.

Summary of Industrial Advisory Committee (IAC) Minutes

The last IAC meeting for the program was held on October 11, 2013. The following items were discussed at this meeting:

1. Introductions - Karen Doutre, Career & Employment Advisor, will post and e-mail full time and internship opportunities to students (ksdoutre@weber.edu). Most of the companies in attendance currently use Weber students for internships and plan to continue to do so.
2. Electronics Engineering Technology 2+2 Curriculum - SLCC and Weber are working together to make SLCC's 2-year program line up with Weber's AAS/first 2 year courses.
3. Course Spotlights
 - Kevin Moss, Edge, suggested the Weber incorporate more soldering into curriculum. SLCC uses ATC certification as requirement for the program. Weber will look into that possibility.
 - Weber is establishing 2 paths through the program, digital and communication. Students will take at least one course in each path per semester. Advisory board agreed this was a good way to proceed.
 - Weber looking at lining up general education and electives to make it easier for students to obtain a business minor. Jared Rea, Austral Star, feels technicians with a business attitude are of great benefit to his company.
4. Student Assessment – departmental exam? - Jordan Larson, Varian, did not feel it was necessary for EET grads to take a national exam. Agreed to by the rest of the Advisory Board.
5. Proposed Program Changes - Split EET 1140 AC/DC into two separate courses, this would allow more lab time for DC portion. Varian and Austral both agreed this would be a benefit to graduates.
6. General Discussion
 - Jared Rea, Austral – Weber is going in the right direction, could use more PLC training. He has old equipment he would donate if needed for troubleshooting.
 - Jordon Larson, Varian – Employees do a lot of troubleshooting. Moving towards wireless/RF.
 - Kevin Moss, Edge – Possibly build a shake table as a senior project.

J. Results of Previous Program Reviews

The last formal review was conducted by ABET in 2009. Here is their final statement.

Criterion 4 states, "The results of these evaluations of program educational objectives and program outcomes must be used to effect continuous improvement of the program through a documented plan." The program's Self-Study Report included metrics to identify what the program considers to be bottom, middle, and top performance. Although a significant amount of evidence was provided to indicate that data are being collected and analyzed for continuous improvement, it is not clear what benchmarks of performance are being used to signal a need to improve the program. In the absence of a baseline metric for determining adequate progress, it will be difficult to systematically and consistently determine when a change to the program is required. Therefore, this finding remains a Concern until the program demonstrates that results from evaluations of program educational objectives and program outcomes are being used to effect continuous improvement of the program through a documented plan.

Summary Information

Little progress has been made on the ABET finding due to the disruptions in the program since 2011.

Program curriculum was significantly revised after the Electronics Engineering Program was approved to realign the Electronics Engineering Technology Program to an ABET accredited technology degree. One full time faculty, Julie McCulley, was transferred to the Engineering Technology Department with the EET program and approximately 170 students for the 2011-2012 academic. Following the transfer the demolition of building 4, where all EET labs were located, was announced. Since no provision had been made to relocate any of the EET labs significant effort was expended by the ET Department and EET Program to relocate the labs into the Engineering Technology Building for the 2014-2015 academic year. During this same time the EET budget experienced significant fluctuations (up to minus 90%), contributing to overall program stress.

This year the program has somewhat stabilized concerning personnel, schedules and funding. Faculty should be able to spend time developing benchmarks, meaningful assessment tools, and assessing learning outcomes. ABET is returning for a formal audit in October of 2015, and faculty are currently working on improving the assessment and continuous improvement for the program with a major self-study due in June.

K. Action Plan for Ongoing Assessment Based on Current Self Study Findings

Action Plan for Evidence of Learning Related Findings

Problem Identified	Action to Be Taken
Issue 1 Lack of Benchmarks for Student Learning Outcomes 7 through 11	Current 5 Year Program Review: Develop Assessments and benchmarks by June 2014
	Year 1 Action to Be Taken: Develop baseline data for assessment 7-11, exam
	Year 2 Action to Be Taken: Develop Revise Assessment Plan for all outcomes
	Year 3 Action to Be Taken: Develop rubric for evaluation of senior project
	Year 4 Action to Be Taken:
Issue 2 Lack of routing industrial advisory board meetings – last one was in 2013	Current 5 Year Program Review: none
	Year 1 Action to Be Taken: Schedule routine advisory board meetings
	Year 2 Action to Be Taken:
	Year 3 Action to Be Taken:
	Year 4 Action to Be Taken:

Summary Information (as needed)

At the time of the submission of this self-study, not enough data has been collected to develop a more detailed action plan or to determine what actions need to be taken, if any. As the program collects more assessment data, actions will be taken as needed based upon that data.

Action Plan for Staff, Administration, or Budgetary Findings

Problem Identified	Action to Be Taken
Issue 1 Lack of funding for full-time faculty.	Current 5 Year Program Review: Notify the appropriate persons.
	Year 1 Action to Be Taken:
	Year 2 Action to Be Taken:
	Year 3 Action to Be Taken:
	Year 4 Action to Be Taken:
Issue 2	Current 5 Year Program Review:
	Year 1 Action to Be Taken:
	Year 2 Action to Be Taken:
	Year 3 Action to Be Taken:
	Year 4 Action to Be Taken:

Summary Information

Since the program has no control over how funding is allocated for faculty positions, the only action that they can take that will address this situation is to inform the department chair and the dean.

L. Summary of Artifact Collection Procedure

Artifact	Learning Outcomes Measured	When/How Collected?	Where Stored?
Final Project Writing Rubric	7	Annually	electronic copies
Final Project Presentation Rubric	7	Annually	electronic copies
Final Project Teamwork Rubric	5	Annually	electronic copies
Survey Responses	5, 6, 7, 8, 9, 10, 11	Annually	electronic copies
Exit Exam	1, 2	Bi-annually	electronic copies
Course Exams	1, 2, 3	Bi-annually	electronic copies
Laboratory Reports	3	Bi-annually	electronic copies
Senior Project Evaluations	4	Annually	electronic copies

Summary Information (as needed)

APPENDICES

Appendix A: Student and Faculty Statistical Summary

	2009-10	2010-11	2011-12	2012-13	2013-14
Student Credit Hours Total	2,891	2,524	2,899	1,788	1,862
Student FTE Total	96.37	84.13	96.63	59.27	62.07
Student Majors	223	177	173	116	106
Program Graduates					
Associate	15	15	16	8	5
Baccalaureate	21	18	17	16	8
Student Demographic Profile					
Female	16	14	15	7	8
Male	217	163	158	109	98
Faculty FTE Total*					
Adjunct FTE*					
Contract FTE*					
Student/Faculty Ratio**					

Note: Data provided by Institutional Research

*Faculty FTE is not available for the EET program separately as the EET faculty are counted together with the MfET faculty

** Because the faculty FTE data is not available, the Student/Faculty Ratio cannot be determined

Appendix B: Contract/Adjunct Faculty Profile

Name	Gender	Ethnicity	Rank	Tenure Status	Highest Degree	Years of Teaching	Areas of Expertise
Kevin Andreasen	M	W	Adjunct	No	BS	1	Electronics
Cory Tonks	M	W	Adjunct	No	MS	11	Electronics

Appendix C: Staff Profile

Name	Gender	Ethnicity	Job Title	Years of Employment	Areas of Expertise
Roger Anderson	M	W	Technician	24	Equipment automation, Computer networks
Cordell Gold	M	W	Technician	1	Maintenance
Pat DeJong	F	W	Admin. Spec.	9	Administration

Appendix D: EET - Financial Analysis Summary

	2009-10	2010-11	2011-12	2012-13	2013-14
Undergraduate					
Instructional Costs	\$428,993	\$426,563	\$381,802	\$331,036	\$346,512
Support Costs	n/a	n/a	\$15,000	\$5,000	\$8,000
Other Costs					
Total Expense	\$428,993	\$426,563	\$396,802	\$336,036	\$354,512

Note: Data provided by Provost's Office

Appendix E: External Community Involvement Names and Organizations

Name	Organization
Carl Belnap	Design Criteria, Inc.
Doug Carlisle	Varian
Jason Carob	L-3 Communications
Michael Clark	FAA
Larry Riggs	Autoliv
Scott Snarr	L-3 Communications – Tech Recruiter
Joe VandenBerghe	Setpoint Systems
? Clayton	L-3 Communications
Industrial Affiliates (future)	
Jared Rea	Austral Star LLC – Vertical Lifting Machines
Ken Gardner	Gardner Engineering – Alternative Energy Services
Daniel Kennedy	Brilliant Integrated Technologies
Kevin L. Moss	PowerTeq
Jordan Larson	Varian Medical Systems

Appendix F: External Community Involvement Financial Contributions

Organization	Amount	Type
Perkins – US Dept. of Education	\$16,900	Grant
UCAP Grant 2014	\$150,000	“
Mark Graves	\$40,000*	Donation
J D Machine	\$50,000*	“
David Roubinet	\$2,800/yr*	“
Autoliv	\$5,000/yr*	“
Parker Aerospace	\$5,000/yr*	“
Barnes Aerospace	\$2,500/yr*	“

*For the Engineering Technology Department and shared among the four programs in the department.