Montana Employment for Electronics Technology Graduates
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The University of Montana College of Technology
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EXECUTIVE SUMMARY

The University of Montana’s (UM) Associate of Applied Science (AAS) degree in Electronics Technology Program is offered through the Department of Applied Computing & Electronics at The College of Technology. The curriculum includes both general education (writing, mathematics, humanities, and science) and specialized technical courses covering topics in computer programming, electric circuits, communications, digital logic, instrumentation, robotics, controls systems and programmable logic controllers. The technical content and rigorous levels of mathematics and science classifies it as engineering technology program of study. Graduates possess the specialized skills needed to support the electronic equipment found in a variety of applications within multiple industries.

This report summarizes interviews with 42 regional organizations. These organizations typically employ 4-100 individuals. Each organization was classified into one of the following seven industry sectors: raw material processing, food processing, materials manufacturing, biomedical manufacturing, shipping, utilities and public works, and building control systems.

Our study investigated regional employment opportunities available for graduates from the UM Electronics program. It specifically focuses on the workforce demand for individuals possessing specialized skills in instrumentation, industrial automation, and control systems. All employer interviewees were provided a copy of the curriculum from the UM program. Nearly all respondents expressed interest in its graduates. Organizations described the ideal applicant as an individual possessing technical expertise, work ethics, and well-rounded soft skills. Work experience was an important criteria for most positions gained through on-the-job (OTJ) training. The experiential learning gained through internships was discussed as a source of work experience for potential applicants and several firms indicated a willingness to provide internships to UM electronics student.

Despite concern by employers over the current economic recession embracing all sectors, those organizations interviewed expect to fill 44-55 jobs with individuals skilled in instrumentation, industrial automation, and control systems over the next two years. Using the results from the poll, our study estimates approximately 120 openings for UM Electronics graduates when all regional organizations are considered over the same timeframe.

Several factors favor employment opportunities for electronics graduates from UM. (1) Graduates possess a unique skill set with limited educational providers within the region. UM is the only program of its kind found in either Montana or Idaho. (2) Individuals currently comprising this specialized sector are aging and will soon be retiring from the workforce. (3) The UM program has had limited exposure with industry. The new partnerships being forged between UM faculty and employers will enhance employment opportunities for graduates. (4) Organizations are strategically transitioning to automated manufacturing equipment in an effort to gain a competitive edge. Graduates have the right skill set to support these automated operations. (5) The “Green Economy” is creating new jobs in energy production and energy efficient building. Graduates will be valued for their technical expertise in control systems by the commercial and residential building industry and power production facilities.
# CONTENTS

Introduction ........................................................................................................................... 3

Scope of Study ....................................................................................................................... 4

Findings .................................................................................................................................. 6
  Raw Materials Processing .................................................................................................. 6
  Food Processing ................................................................................................................. 7
  Materials Manufacturing ..................................................................................................... 7
  Biomedical Manufacturing ................................................................................................. 8
  Shipping .............................................................................................................................. 8
  Utilities and Public Works ................................................................................................. 8
  Commercial and Residential Building Controls ................................................................. 9

Limitations ................................................................................................................................ 10

Student Internships .............................................................................................................. 12

Feedback from Industry ........................................................................................................ 13

Conclusion .............................................................................................................................. 14

Appendix A. List of Organizations Interviewed .................................................................... 15

Appendix B. Relevant Organizations Not Included In Study ................................................ 18
INTRODUCTION

Our study investigates how national, regional, and societal trends impact industries employing individuals with specialized training in electronic control systems; industrialization automation; and instrumentation or more simply stated – industrial automation. We’ve identified industrial automation as an area of emphasis in the curriculum of the University of Montana (UM) Electronics Technology A.A.S degree program. The report is based on 42 interviews conducted with owners and business managers from companies requiring individuals to support their industrial automation equipment. The study identified nine industry sectors and conducted interviews with companies from the seven sectors most likely to hire individuals skilled in instrumentation, industrial automation, and control systems.

The national economic trends described as profoundly influencing jobs in the manufacturing industry were the current recession and the globalization trend of off-shoring manufacturing jobs to overseas entities. Companies interviewed expressed serious concern regarding declining revenue and described a trend were their operations employing fewer individuals. Inexpensive transportation and reduced foreign labor costs have shifting much of our countries historic manufacturing base offshore locations. This has led to a major shift in our economic structure from the secondary or manufacturing sector to the tertiary or service sector. In general, those companies that remain in the secondary sector are extremely specialized, which makes it more difficult to find skilled workers in foreign countries. Other secondary sector businesses have adapted new production practices relying heavily on automated industrial equipment.

New technologies have changed the control systems used by commercial and residential building. As an example, the standard thermostat has been replaced by digital programmable units. Driven by the demand for enhanced energy efficiency, these advanced control systems are now common in lighting, and heating, ventilation and air conditioning (HVAC) systems. These units utilize electronic control systems and require instruments to troubleshoot problems. Although licensed electricians are still valued, service work for these specialized devices require a different skill set and knowledge in electronic control systems.

The demographic of the current workforce in Electronics is comprised mainly of individuals from the “Baby Boom” generation. Approximately 78 million Americans, more than a quarter of individuals in this sector of the workforce, are poised for retirement in the next 12 years. This national trend will leave many well-paid positions available for younger applicants with appropriate skill-sets. Employers in our study expressed concerns about finding qualified replacements for these high-skill positions.
SCOPE OF STUDY

Individuals educated in CSIAI equipment support many industries in Montana. The scope of potential jobs is distributed across multiple sectors of the economy. The majority of companies interviewed identified 2-5 positions in their organizations where workers with electronics training were required.

Our study consisted of forty-two (42) interviews of employers with potential interests in graduates from the UM Electronics Technology program. Based upon the primary mission of the employer, seven industry sectors were identified. Industries sectors include: (1) raw material processing, (2) food processing, (3) biomedical manufacturing, (4) materials manufacturing, (5) shipping, (6) utilities, and (7) commercial and residential building controls (CRBC). The proportion of industry sector interviews is shown in Figure 1 while the names of organizations per industry are shown in Table 1. All reported interest in hiring graduates from the Electronics Technology program at UM.

Figure 1. Interviews by Industry Sector
### Table 1. Organizations Interviewed (by Industry Sector)

<table>
<thead>
<tr>
<th>Industry Category</th>
<th>Organizations Interviews</th>
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<tbody>
<tr>
<td>Raw Material Processing</td>
<td>F. H. Stoltze Land and Lumber</td>
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<td>Montana Refining Company</td>
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<td>Food Processing</td>
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<td>Coca Cola</td>
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<td>Culligan Water Company</td>
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<td>McGowan Water</td>
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<td>Biomedical Manufacturing</td>
<td>Glaxo, Smith, Klein</td>
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<td>Nutritional Laboratories</td>
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<td>Rocky Mountain Labs</td>
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<td>St. Patrick Hospital</td>
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<td>Materials Manufacturing</td>
<td>Bee Alert Technologies</td>
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<td>Big Bear Sign Company</td>
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<td>Diamond Aire LLC</td>
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<td>Diversified Plastics</td>
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<td>Felco Industries</td>
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<td>G.O.R.</td>
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<td>Glacier Jet Technologies</td>
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<td>HCR</td>
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<td></td>
<td>Ironwood Manufacturing</td>
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<td>Kustom City Fiberglass</td>
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<td>Lifting Technologies</td>
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<td>MT DNRC</td>
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<td>Norco Products</td>
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<td>Prairie Kraft</td>
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<td>Pro Sign</td>
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<td>Rocky Mountain Molding</td>
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<td>Satic Inc.</td>
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<td>S &amp; K Electronics</td>
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<td>Shipping</td>
<td>Montana Rail Link</td>
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<tr>
<td>Utilities and Public Works</td>
<td>City of Great Falls</td>
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<td>City of Whitefish</td>
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</table>
FINDINGS

Raw Material Processing
This category of employment includes mining, refining, forest product extraction and processing. Although this study did not fully explore jobs in mining, discussions with multiple companies indicate that mining activities are on the rise. The continued high price of oil, natural gas and precious metals creates an economically feasible environment for new operations throughout the state. The use of industrial automation equipment has increased in this sector due to the complexity of modern mining operations. Based on conversations with individuals from extractive companies, the immediate need is great for all positions, but electronics technicians are particularly valued due to the automated machines currently in place.

Montana is a state rich in the natural resources of forests, precious metals, and fossil fuels. Geographically, Montana sits in the center of the Northern Rockies, far from the large economic centers of the coastline. Its low population density and surplus of natural resources creates opportunity for numerous jobs in extraction and processing of raw materials.

During past decades, the regional industry has experienced shutdowns of lumber mills and processing plants, due to the economic recession and international competition. Our interviews with forest products manufacturers indicate a recent climb in product demand. Lumber mills remaining in the state are holding steady and some have shown growth. Interviews show that the domestic market is stable despite the lack of new home construction nationwide. Two facilities indicated a strong overseas market consisting of large lumber purchases from Montana mills, primarily due to rapid economic growth in Eastern China. The raw material processing economic sector has seen growth in the production of metric dimensional lumber for use in concrete forms. Additionally, national interest and growth in biomass energy plants has increased the demand for forest byproducts, such as pellets and wood shavings, offering lumber mills another product and source of income.

Managers describe the expansion of automated machinery in facilities with the capability of producing higher quality lumber at record rates. With the expansion in production and automation, there has been an increase in the use of electronic components and need for individuals skilled in troubleshooting. These new devices use numerous sensors, electrical components, and programmable logic controllers. Individuals are needed with the knowledge and skills necessary to install, operate and maintain this equipment. Traditionally trained electricians are not as well suited for these types of operations or must seek additional instruction in industrial automation. Some employers describe the importance of licensure for individuals to work with these applications as a component of state inspection and approval.
Food Processing
Much of the food and beverages consumed in the state of Montana are supplied from outside the region. Processed food products are transported from plants in the Midwest, Pacific Coast and even offshore. With the exception of companies like Wheat Montana, those raw food products grown in Montana are generally shipped to the same out-of-state facilities.

Production of beverages is the exception to this trend. Local production is preferred due to the additional weight of liquid products. Shipping and transportation costs provide incentives for companies such as Coca-Cola to manufacture and bottle their products locally. Bottling operations require various levels of industrial automation. These facilities are distributed throughout the state and create a demand for individuals with an industrial automation background to service operations. Besides production, distribution requires refrigeration and electronic payment devices, which again generates additional demand for individuals skilled in electronics. Operations managers have indicated difficulty in finding skilled workers to service machines found in both production and distribution of their products.

The demand for filtered water has created an industry consisting of increasingly complex controls and expansion outside of traditional plumbing for domestic water. The use of ultraviolet conditioning, flow sensors and other electrical based components are standard procedures for water processing. There is a steady need for workers in Montana who can use and maintain this equipment. However, employers have traditionally searched outside the state for qualified applicants.

Material Manufacturing
The materials manufacturing industry appears to have the largest number of workers with some electronics training. Companies in this sector utilize automation, robotics, system controls, instrument operation, calibration, and electrical maintenance. The State of Montana has hundreds of small manufacturers which use all or some of this type of equipment. Regional examples include: Diversified Plastics, producer of large plastic sprockets and employer to 49 individuals; and Lifting Technologies, manufacturer of specialized lifts for construction and employer of 10 individuals. Large manufacturers (those with 200+ employees) are rare in the region. Perhaps one factor discouraging more industry from moving operations to Montana is its remote geographic isolation from major markets. Additionally, the region has seen recent shutdowns as large companies have chosen to move operations to other regions.

Still, there is a vital manufacturing industry consisting of small businesses. Some companies sell hard-to-find specialized equipment, while others have been able to incorporate new technologies to produce competitively priced products. One example of this adaptation in manufacturing is the shift towards Computerized Numerical Control (CNC) industrial equipment. This type of equipment replaces older mechanical equipment and offers greater features and flexibility. Manufacturers using CNC machines are able to produce high quality products in a fraction of the time compared to those using older technology.

The manufacturing workforce has had to change as well. Today, individuals employed in this field must be knowledgeable in programming and electronics, creating additional employment opportunities for individuals trained in industrial automation equipment.

Those companies interviewed described further expansion in CNC operations. Managers agreed that increased training in the use of electronic devices will be required of all employees. Companies describe
maximizing material inputs, reducing margins of error, and increasing production as critical components in maintaining competitiveness.

**Biomedical Manufacturing**

The research and engineering-related activities required in biomedical manufacturing have resulted in a product garnering higher revenues than many other manufacturing industries. Biomedical manufacturing has been able to maintain its production facilities in America and individuals involved in production receive higher wages than other manufacturing sectors. Workers in this sector are required to possess specialized technical skills. The electronics skills found in both production facilities and laboratories include custom precision instrumentation with minimal margins of error due, in part, to the direct impact on human health from products of this industry.

Interviews with managers from four biomedical production companies describe complex, custom machinery including industrial automation equipment, robotics, laboratory and surgical instruments. Regular service work is completed by in-house electronics and mechanical specialists due to the uniqueness of this machinery and an industry requirement to protect intellectual property assets.

Managers from Nutritional Laboratories and Rocky Mountain Labs prefer those applicants graduating from four-year degree programs, while managers from GlaxoSmithKline (GSK) and St. Patrick Hospital expressed specific interest in graduates from the UM Electronics Technology program. These latter employers requested further dialogue and information from the UM program.

**Shipping**

Employers from the shipping industry also expressed interest in graduates from the UM Electronics Technology program. Managers at United Parcel Service (UPS) and FedEx discussed the extensive automation in their shipping operations. Both employers described the important role electronics technicians contribute in keeping operations running smoothly through the service and prompt repair of automation equipment.

Montana Rail Link (MRL) expressed interest in the Electronics Technology program for their component repair and operation of signals and track control systems. At the time of the interview, MRL had positions available for electronics technicians and expected increased job openings for this area over the next two years due to the increasing demand for heavy rail shipping.

**Utilities and Public Works**

Public and private utilities produce and distribute essential resources for all communities. Utilities relevant to this study include energy generation and distribution, city water filtration and distribution, traffic control systems, and sewage and wastewater treatment.

Centralized energy production plants utilizing coal, natural gas, nuclear, water, wind, sun, and biomass require significant electronic components and control systems. Sewage and wastewater treatment facilities rely on similar control systems as well. These large, complex facilities rely on highly trained individuals with specialized skills in electronics.

Our nation is experiencing high-growth in sustainable energy production. Montana is well-suited for expansion in this area due to its expansive natural resources. These systems utilize substantial electronic components creating employment opportunities in green energy production for individuals
with backgrounds in control systems and electrical circuits. Growth in green energy technologies will result in additional positions for electronics technicians. The 2010 UM study *Opportunities for Energy Technology Program Graduates in Montana’s Energy Industry* completed by Diana Maneta provides a comprehensive description of employment opportunities in this high-growth sector of the Montana economy.

Other interviews involving city officials describe the importance of remote computers and service operator stations to control energy and water distribution. As these automated systems become more common, both utility companies and municipalities will require individuals trained in electronics. Interviews with officials from public works organizations and the utilities industry are underrepresented in this study due to limited resources, but individuals employed in these organizations generally receive reasonable pay with benefits and opportunities for career longevity.

**Commercial and Residential Building Controls**

As cited in other sectors, the trend in the commercial and residential building involves installation of automated electrical components using complex technologies. Devices such as water heaters, HVAC control systems, and lighting controls include computerized components aimed at maximizing efficiency. High performance building structures and green buildings rely heavily on automated systems. Green building certification programs such as the US Green Building Council’s Leadership of Energy and Environmental Design (LEED) require that builders include state-of-the-art control systems to monitor energy use and reduce energy consumption. The LEED points system favors those designs which implement these automated control systems. Growth in the green building industry is evidenced by the national growth of LEED-certified buildings from fewer than 3000 projects in 2002 to almost one million registered buildings in 2010. Additionally, some entities, including the Montana University System, are requiring at least minimal levels of LEED certification for all new construction projects.

The integration of advanced electrical controls has required traditional electricians and plumbers to outsource installation and maintenance to specialized companies familiar with new technologies. Interviews with employers from these traditional companies indicate a desire to consider skills in electronic control systems for all new hires and a desire to move installation and maintenance in-house.

Despite slow growth in the building industry, perhaps this sector holds the greatest numerical job opportunities for graduates from the UM Electronics Technology program. Employment of individuals skilled in electronics is a new development in this industry and growth will continue to reflect this trend as business strategies are developed. Employers predict a slow, but continued economic recovery followed by a surge in employment for qualified electronics professionals. There are exceptions including employers at both *Anderson Home Heating* and *McKinstry*. Each entity expects to double their staff in the next three years adding ten new employees skilled in electronics and control systems. Graduates from the UM Electronics Technology program will be strong applicants for these new positions.
LIMITATIONS

The scope of our study was limited to a sample subset of actual employment. The actual population of organizations found in each of the industry sectors totals several hundred while our study subset includes 46 interviews. The industry sectors shipping, raw material processing, utilities and public works, and residential and commercial building controls are proportionally underrepresented in our interview sample. Figure 2 demonstrates the limited geographic range of this study. Appendix B provides a more comprehensive list of regional employers not interviewed, but potentially relevant to the study.

Additionally our study sought to identify potential employers requiring a subset of skills from the UM Electronics Technology program. Specifically our study responded to a local request to support regional industry by providing educational programs involving instrumentation, industrial automation, and control systems. Based upon this constraint, the communication technologies industry was not interviewed in this study despite the qualifications of UM Electronics Technology graduates for these positions. Employment opportunities in communications appear strong. In an interview conducted with the Montana Department of Natural Resources and Conservation (MT DNRC), a manager described his intent on hiring three new individuals in the next two years based on the need for communication technicians. Other potential employers in the communications sector include the Montana Highway Patrol and the Montana Department of Transportation.

Figure 2. Study Area and Population Density of Montana in 2000
The *environmental remediation* sector illustrates another specialized market where individuals in control systems and instrumentation are needed. This field, similar to biomedical manufacturing, has very tight parameters often involving the measurement of contaminants in parts per billion. Specialized remediation systems including soil vapor extraction, groundwater aeration, and soil incineration utilize electronic control systems. Soil vapor extraction systems use subsurface blowers which must be precisely automated and properly calibrated in order to function. These systems are increasing in complexity each year and utilize a control warehouse with remote subsurface sensors. Groundwater aeration systems use large centralized aeration units, with hundreds of micro-sensors, all controlled by computers and multiple electrical components. Due to the volatile nature of contaminants, these systems require constant maintenance performed by workers with electronic circuit and troubleshooting skills to maintain them. Soil incineration facilities are similar to centralized energy production plants in terms of complexity and electrical controls. States are also starting to require updating facilities to include greater reliance on control systems and industrial automation. Our report does not include specific interview with officials from the *environmental remediation* sector.
STUDENT INTERNSHIPS

Employers across all industries prefer experienced applicants for their positions. Experience can be difficult for any new graduate to obtain. Employers described internships as a suitable replacement for some on-the-job training and to provide individuals with some work-related experience. Other desirable characteristics of applicants included work ethic, professional soft skills, and reliability. These employee characteristics were highly valued by numerous managers.

Internships not only offer students real experience, but also initiate communication and synergy between industry, faculty, and the university. Student intern opportunities are currently limited for UM students in the Electronics Technology program. Twelve employers indicated (Table 2) current interest in providing student internship opportunities.

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<tr>
<th>Industry</th>
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<td>CRBC</td>
<td>MT DNRC</td>
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<td>Palmer Electric Technology</td>
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*Appendix A contains contact information for these organizations.*
FEEDBACK FROM INDUSTRY

Nearly all interviewees were impressed with the comprehensive curriculum described in the UM Electronics Technology program. Although each company was interested in a subset of specific classes, the aggregate feedback showed that all classes were important.

Raw material processing plants would like their electronics employees to have greater experience in PLCs, infrared sensors, robotics, hydraulics, pneumatics, component replacement, fuses, and electric motor repair. Companies in this industry would also like ISA certification and a license system similar to a journeyman electrician.

Food processing facilities indicated the need for individuals with skills in troubleshooting as part of a larger systems operation and an understanding of refrigeration systems. Manufacturers described the need for workers with troubleshooting and knowledge in computer numerical control systems (CNC), computer ladder logic, welding, troubleshooting, AC and DC current. Biomedical identified electronics and electric motor repair as additionally needed skill sets. Some companies favored IEEE certifications. Three companies wanted individuals with electronics Computer-Aided Design skills, particularly in the software products Solid Works and MasterCAM RD.

Utilities companies are looking for technicians with Class B and water distribution certificates with knowledge in fiber optic cameras, security systems, and safety. Companies that install and service commercial and residential building controls need workers to understand ladder diagrams, schematic relays, capacitors, refrigeration, gas combustion, and safety.
CONCLUSION

Despite the current economic recession, there will continue to be employment opportunities available to graduates of the UM Electronics Technology program with skills and knowledge in control systems, industrial automation, and instrumentation equipment. Based upon the 42 organizations interviewed in the study, approximately 44-55 jobs openings are predicted over the next two years. Estimates for the number of positions in this field increase proportionally to as high as 120 positions when expanding the scope to include all regional employers rather than only those interviewed in the study. Although many interviewees predict economic stabilization and a solid economic recovery, the current recession may have unforeseen consequences on employment predictions.

The Electronics Technology program is the last remaining program of its type in the state. Graduates from this program will have an advantage in those jobs where these skill-sets are needed. Additionally, many positions are expected to open as the current workforce of individuals skilled in electronics retires.

Continued communication between the UM programs and industry is paramount. Several organizations interviewed had no knowledge of the UM Electronics Technology program. Communication between faculty members and industry employers creates a sense of trust, particularly for smaller organizations. UM graduates will have a clear advantage if partnerships exist with industry employers.

Another trend taking place involves the expansion of automation equipment and CNC machinery in manufacturing. The motivating factor for investment by these manufacturers is to gain a competitive advantage. They will need skilled installers and operators for these new automation efforts. Those organizations interviewed predict the use of electronics to increase over the next decade throughout the manufacturing sector.

The building industry has reported growth in green building practices. As the building industry recovers from the recession, the installation and maintenance of complex control systems will spur job growth for individuals trained in these new technologies. Growth in the sector will occur as building codes are refined and financial incentives are continued and even enhanced.

Energy production facilities will utilize these individuals to support the control systems found for power generation. Biomass generators, hydroelectric operations, wind farms and coal generation facilities will all require skilled technicians.
APPENDIX A: ORGANIZATIONS INTERVIEWED
(By geographic area)

Missoula
Anderson's Home Comfort
Contact: John Anderson
2430 Dixon Ave. Missoula, MT
406-728-8048

Bee Alert Technologies
Contact: Robert Saccum
1620 Rodgers St # 1 Missoula, MT
406-541-3160

Big Bear Sign Co. Inc.
Contact: Wendy McNally
1315 Clark Fork Ln. Missoula, MT
406-542-1871

Coca-Cola Bottling Co. of MT
Contact: Jim Riska
2010 S 3rd St. W Missoula, MT
406-523-4048

Culligan Water Conditioning
Contact: Wanda
2020 Ernest Ave. Missoula, MT
406-721-1991

Diversified Plastics Inc.
Contact: Wendy
3721 Grant Creek Rd. Missoula, MT
406-543-6653

Felco Industries, Ltd
Contact: Kurt Weishaar
3660 Grant Creek Rd. Missoula, MT
406-728-9103

Garden City Plumbing and Heating
Contact: Marci Tef
4025 Flynn Ln. Missoula, MT
406-728-5550

Ironwood Manufacturing Inc.
1700 Turner St. #1 Missoula, MT
406-721-4747

Lifting Technologies
7406 Racetrack Dr. Missoula, MT 59808
406-728-3950

McGowan Water Conditioning
Contact: John
101 N Grant Street Missoula, MT
406-728-3590

McKinstry
Contact: Tim Tolman
135 W. Main Missoula, MT
406-214-3501

Montana Department of Natural Resources and Conservation
Contact: Ben Super
1401 27th Ave. Missoula, MT
406-542-4200

Montana Department of Natural Resources and Conservation
Contact: Shaun Gallagher
Spurgin Rd. Missoula, MT
406-542-4213

Montana Rail Link
101 International Dr. Missoula, MT
406-523-1500

Norco Products
Contact: Jim
4983 Blue Mountain Rd. Missoula, MT
406-251-3800

Nutritional Laboratories
Contact: Elizabeth
1001 3rd St. Missoula, MT
406-273-5493
Palmer Electric Technology
Contact: Roger Peterson
2407 Havre Ave. Missoula, MT 59801
406-543-3086

Plum Creek
Contact: Gretchen Elmar
140 N Russell St. Missoula, MT
406-892-6105

Pro Sign Inc.
9562 Futurity Dr. Missoula, MT
406-549-2993

Ridgeline Electrical Contracting
801 Stephens Missoula, MT
406-207-3590

Roseburg Forest Products
Contact: John Mikkelson
3300 Rasor Rd. Missoula, MT
406-728-3910

Satic Inc.
Contact: BD Erickson III
2801 Connery Way STE A Missoula, MT 59808
406-493-1861

Saint Patrick Hospital
Contact: John Gross
500 W. Broadway Missoula, MT
406-543-7271

UM Facility Services
Contact: Hugh Jesse
32 Campus Dr. Missoula, MT
406-243-2788

Bitterroot Valley
GlaxoSmithKline
Contact: Cindy
553 Old Corvallis Rd. Hamilton, MT
406-375-2111

Rocky Mountain Labs
Contact: Jon Bar
903 S 4th St. Hamilton, MT
406-363-3211

Kalispell and Columbia Falls
City of Whitefish
Contact: Sherri Bor
418 2nd St. E Whitefish, MT
406-863-2460

Diamond Aire LLC/Geronimo MT
Contact: John
1893 Airport Rd. Kalispell, MT
406-752-5092

F H Stoltze Land & Lumber Co
Contact: Joe O'Rourke
600 Halfmoon Rd. Columbia Falls, MT
406-892-7007

Glacier Jet Technologies
Contact: Josh
468 Ash Rd. Kalispell, MT
406-755-7989

Great Falls
City of Great Falls
Contact: Linda Williams
2 Park Dr. South, 2nd floor 202 Great Falls, MT
406-455-8448
Kustom City Fiberglass Inc.
Contact: Susie
5817 2nd Ave North, Great Falls, MT
406-452-1046

Montana Refining Company
Contact: Shane Johnson
1900 10th St NE Great Falls, MT
406-761-4100

Rocky Mountain Molding
3001 Barley Ln. Black Eagle, MT
406-771-8733

Praire Kraft
Contact: Lesley Philman
Great Falls, MT
406-727-2541

Other Regions
G.O.R
Contact: Les Wood
112 East McGowan St. Plains, MT
406-396-2097

Pyramid Mountain Lumber, Inc.
Contact: Todd Johnson
379 Boy Scout Rd. Seeley Lake, MT
406-677-2201

RBM Logging and Lumber
Contact: Tom Blakney
Columbia, MT
406-892-4209

S & K Electronics Inc.
Contact: Jesse Going
56301 Hwy 93 Ronan, MT
406-883-6241

Tricon Timber
Contact: Michael McDonald
162 Old Mill Loop St Regis, MT
406-649-2485
APPENDIX B: RELEVANT ORGANIZATIONS NOT INCLUDED IN STUDY

93 Wood Products Inc.
A W Pratt Inc.
ABC
ABT
Advanced Manufacturing Service
Advanced Silicon Materials LLC
Air Design
All Pro Composites
Allied Manufacturing Corp
Allied Steel
Alster Communications
American Eagle Instruments Inc.
Anderson Sawmill
Ascent Products Inc.
Avista Corp
B & J Sawmill
Basin Creek Power Services LLC
Beaver Wood Products
Benjamin Aviation & Machines
Big Sky Engineering
Big Sky Forest Products
Big Sky Insulations, Inc.
Big Sky Naturals
Cable Technology, Inc.
CBS
Centech Corp
City of Butte/Silverbow County
City of Helena
City of Kalispell
Clements Rubber Products
Colstrip Energy LP
Comfort Systems USA
Community Hospital of Anaconda
Community Medical Center
Continental Energy Services Inc.
Crowder Lumber Co
Crystal Mountain Enterprises
Custom II Manufacturing Corp
Custom Machining & Hydraulics
D & S Heating and Sheet Metal
Darcova Inc.
Dragon Manufacturing Co Inc.
Envirocon
Eureka Pellet Mills, Inc.
Flowmark Co., Inc.
General Electric of Montana
George R. White Bark Processing
Glacier Cross Inc.
Grizzly Gaming
GT Solar
HeadRoom Corporation
Headwater Products LLC
Hi-Heat
Hunt's Timbers, Inc.
Hydrodynamics Inc.
Industrial Automation Consulting, Inc. (IAC, Inc.)
Johnson Controls
KECI
Kicker Sawmill
KPAX
Lattice Materials Corp
Louisiana Pacific - Deer Lodge
Mattress Mill
MDU Resources Group Inc.
Millennium Plastics
Mobile phone
Montana Container Corp
Montana Electric Motors, Inc.
Montana Highway Patrol
Montana Hydraulics, L.L.C.
Montana Manufacturing Extension Center (MMEC)
Montana Electronics
Montola Growers, Inc.
Mountain Water
MTDC
MTDOT
Northern Plastics Inc.
Northwest Distributors
Northwest Industries of Montana
Northwestern Energy
Nygren Lumber
Omega II Inc.
Page Northwest
PDC Harris Group LLC
Philips Environmental Products
Plasnetics USA Inc.
PM Services, contract for GSA
PPL Montana LLC
PPL Spectrum
R & R Industries Inc.
RG Lumber
R-Y Timber Livingston
Safe Shop Tools Inc.
Sanjel
Scientific Materials Corp
SFR Corporation
Sidney Millwork Co
SMS Technologies
Smurfit Stone Container Corp

State of Montana
Stillwater Mining Co
Sugar Loaf Gaming Plum Creek
Sunburst Sensors
SWS Corp
Thompson Falls Post and Rail Inc.
Thompson River Lumber Co
US Forest Services
UM Technology Transfer
UPS
US Bureau of Reclamation
USCE
Valley Electric
Vemco
West Electronics Inc.
Wheat Montana
Wilray Manufacturing Inc.