Department of
Electrical & Computer Engineering

Electrical Engineering Program
Alumni and Employer Surveys

Submitted to

Engineering Accreditation Commission of ABET, Inc.

Prepared by the

Center for Policy Analysis
University of Massachusetts
Dartmouth

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# Table of Contents

**EXECUTIVE SUMMARY** ......................................................................................................................... iii

1.00 **INTRODUCTION** ................................................................................................................................. 1

   1.10 **ALUMNI AND EMPLOYER SURVEY, 2008** .................................................................................... 1

   1.20 **PROGRAM EDUCATIONAL OBJECTIVES** .................................................................................... 2

2.00 **METHODOLOGY** ................................................................................................................................. 3

   2.10 **ALUMNI SURVEY** ............................................................................................................................ 3

   2.20 **EMPLOYER SURVEY** ....................................................................................................................... 3

3.00 **ALUMNI SURVEY RESULTS** ................................................................................................................. 4

   3.10 **YEAR OF GRADUATION** .................................................................................................................. 4

   3.20 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE I: PROFESSIONAL PRACTICE** ........... 5

   3.21 Employment Status and Current Position ............................................................................................... 5

   3.22 Job Title ............................................................................................................................................... 6

   3.23 Length of Employment with Current Employer ................................................................................... 6

   3.24 Number of People Supervised ............................................................................................................. 7

   3.25 Respondents Employed in a STEM (Science, Technology, Engineering, and Mathematics) Field ...... 7

   3.30 **QUESTIONS RELATED TO OBJECTIVE II: PROFESSIONAL GROWTH** ....................................... 8

   3.31 Graduate Courses Taken Since Graduation ........................................................................................... 8

   3.32 Professional Development Endeavors .................................................................................................. 8

   3.40 **QUESTIONS RELATED TO OBJECTIVE III: PROFESSIONAL CONDUCT** ................................. 9

   3.41 Number of Professional Societies To Which Respondent is a Member ............................................... 9

   3.42 Engagement in Voluntary Professional or Community Service Doing Tasks Related to Profession ...... 9

   3.43 Awareness of the Social and Ethical Ramifications of Professional Work ............................................. 10

4.00 **EMPLOYER SURVEY** ............................................................................................................................. 11

   4.10 **BUSINESS BACKGROUND** ............................................................................................................. 11

   4.20 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE I: CAREER ADVANCEMENT** ........ 12

   4.30 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE II: PROFESSIONAL GROWTH** .......... 13

   4.40 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE III: PROFESSIONAL CONDUCT** .... 14

   4.50 **OVERALL PERFORMANCE** ............................................................................................................ 15

   4.60 **ADDITIONAL COMMENTS** .............................................................................................................. 15

**APPENDIX A: ALUMNI SURVEY INSTRUMENT** ....................................................................................... 16

**APPENDIX B: EMPLOYER SURVEY INSTRUMENT** .................................................................................... 20
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EXECUTIVE SUMMARY

The Department of Electrical and Computer Engineering at UMass Dartmouth, which offers undergraduate programs of study leading to a Bachelor of Science degree in either Electrical Engineering or Computer Engineering, is in the process of reaccreditation. The organization conducting the reaccreditation is the Engineering Accreditation Commission of ABET, Inc., an accreditor for college and university programs in applied science, computing, engineering, and technology.

To maintain their accreditation with ABET, both the Electrical and Computer Engineering programs must report on the performance of their B.S. degree recipients 3 to 5 years after graduation, particularly in terms of each program’s effectiveness in attaining its stated educational objectives and outcomes. Accordingly, in 2008 the Electrical Engineering program conducted a survey of alumni who graduated between 2003 and 2008 and a survey of employers who employed these graduates. The results of the surveys were included in the department’s self-study report.

After a subsequent site visit in 2010, ABET cited a weakness in the program’s educational objectives and recommended a change that provided stronger focus on the experiences of graduates. Thus, the Center for Policy Analysis was asked to undertake the current analysis that measures the Electrical Engineering program’s success in meeting these new educational objectives.

Alumni Survey

The alumni survey includes measures that are directly related to the program’s educational objectives. A total of 102 surveys were mailed to Electrical Engineering alumni from the Class of 2003 through the Class of 2008. Four surveys were returned because they did not have a deliverable address, thus 98 surveys were successfully mailed to alumni. A total of forty-one surveys were completed and returned by mail (N=16) and on-line (N=25), for a response rate of 42 percent. Results include:

Measures Related to Educational Objective I: Professional Practice

- All forty-one alumni report that they are employed and six (15%) report that they are also enrolled in graduate school.
- A third of alumni (33%) describe their current position as Product Design and Development, followed by “other” positions (23%), Project Management (13%), Research and Development (10%), Consulting (10%), Testing (5%), Manufacturing (3%), and Technical Marketing (3%).
- Sixty-eight percent of alumni (68%) report that they have worked for their employer more than 3 years, while 3 percent have worked for their employer less than 6 months, 3 percent have worked 7 to 12 months, 8 percent have worked 1 to 2 years, and 20 percent have worked for 2 to 3 years.
- Thirty-eight percent of alumni (38%) report that they supervise employees; 15 percent supervise 2 to 3 employees, 15 percent supervise 4 to 10 employees, 3 percent supervise 11 to 20 employees, 5 percent supervise 21 to 30 employees. No alumni supervise more than 30 individuals.
- Eighty-eight percent of alumni (88%) report that they are employed in a STEM field (science, technology, engineering, and mathematics).
Measures Related to Educational Objective II: Professional Growth

- Fifty-seven percent of alumni (57%) have taken graduate courses since their graduation from UMass Dartmouth; 15 percent have taken 3 to 6 credits, 5 percent have taken 7 to 12 credits, 10 percent have taken 13 to 20 credits, 17 percent have taken 21 to 30 credits, and 10 percent have taken more than 30 credits.
- Seventeen percent of alumni (17%) have received a Masters of Engineering degree since their graduation from UMass Dartmouth.
- In terms of professional development:
  - 83 percent of alumni report that they have attended short courses or workshops,
  - 85 percent have attended training programs or conferences,
  - 98 percent have assumed greater responsibility or leadership, or been promoted since their initial employment, and
  - 35 percent have made a transition into another technical or professional career.

Measures Related to Educational Objective III: Professional Conduct

- Thirty-four percent of alumni (34%) are members of a professional society; 24 percent of these alumni are members of one professional society and 10 percent are members of two professional societies.
- Forty-two percent of alumni (42%) report that they have been engaged in voluntary professional or community service doing tasks related to their profession.
- Ninety percent of alumni (90%) indicate that they are aware of the social ramifications of their professional work in their career.
- Ninety-five percent (95%) indicate that they are aware of the ethical ramifications of their professional work in their career.

Employer Survey

To further measure the program’s success in satisfying its three educational objectives, an on-line employer survey was conducted of businesses that employ UMass Dartmouth Electrical Engineering B.S. recipients who graduated between 2003 and 2008. A total of 25 employers were contacted by email or telephone and asked to complete the survey online. Fourteen surveys were completed for a response rate of 56 percent. These respondents employ a total of 46 Electrical Engineering alumni, which represents 36 percent of the 129 alumni who graduated from 2003 to 2008. Results of the employer survey include:

Measures Related to Educational Objective I: Career Advancement

- A large majority of employers (86%) indicate that all of the UMass Dartmouth Electrical Engineering graduates they have employed in the last 3 to 5 years have a job title that falls in one of the categories included in Educational Objective 1.¹ This figure represents 78 percent of the total alumni employed by respondents.

¹ These titles include product design and development, field engineering, quality control, research and development, manufacturing, consulting, testing, project management, and technical marketing.
Measures Related to Educational Objective II: Professional Growth

- Seventy-nine percent of employers (79%) report that all of the UMass Dartmouth Electrical Engineering graduates they employ have demonstrated continuous career improvement as evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers. This figure represents 67 percent of the total alumni employed by respondents.

Measures Related to Educational Objective III: Professional Conduct

- All but one employer (93%) report that all of the UMass Dartmouth Electrical Engineering graduates they employ have demonstrated an awareness of the social and ethical ramifications of their work. This figure represents 87 percent of the total alumni employed by respondents.

Overall Performance of Alumni

- Employers were asked to rate the performance of the UMass Dartmouth Electrical Engineering graduates that they employ. Ninety-three percent of employers (93%) rate the graduates they employ as excellent, while 7 percent rate the performance of graduates as very good. These figures represent 87 percent and 13 percent of the total alumni employed by respondents respectively. No employers rate the graduates they employ as satisfactory, fair, or unsatisfactory.
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1.00 INTRODUCTION

The Department of Electrical and Computer Engineering at UMass Dartmouth is in the process of reaccreditation. Accreditation is a peer-review process that assures that the education provided by institutions of higher education meets acceptable levels of quality. The organization conducting the reaccreditation is the Engineering Accreditation Commission of ABET, Inc., an accreditor for college and university programs in applied science, computing, engineering, and technology.

As part of the accreditation process, the department’s Electrical Engineering program is required to measure its effectiveness in attaining its stated educational objectives and outcomes. Success in meeting these educational objectives and outcomes is measured by a periodic assessment and evaluation process. Specifically, ABET requires the department to satisfy the following three criteria:

Criteria I: Program Educational Objectives

ABET requires each program that seeks accreditation or reaccreditation to have in place:

(a) published educational objectives that are consistent with the mission of the institution and these criteria,
(b) a process that periodically documents and demonstrates that the objectives are based on the needs of the program’s various constituencies, and
(c) an assessment and evaluation process that periodically documents and demonstrates the degree to which these objectives are attained.

Criteria II: Program Outcomes

Engineering programs must demonstrate that their students attain stated outcomes that foster the attainment of the program educational objectives.

Criteria III: Continuous Improvement

Each program must show evidence of actions to improve the program. These actions should be based on available information, such as results from Criteria I and Criteria II.

1.10 ALUMNI AND EMPLOYER SURVEY, 2008

In 2008, the program conducted a survey of Electrical Engineering alumni who graduated from the program between 2003 and 2008. A survey of employers who employed these graduates was also undertaken. The goal of the surveys was to measure the degree to which alumni and employers believed that the Electrical Engineering program met its educational objectives and outcomes. The results of the surveys were included in the program’s self-study report.

After a subsequent site visit in 2010, ABET cited a weakness in the program’s educational objectives and recommended a change that provided stronger focus on the experiences of graduates. Thus, the Center for Policy Analysis was asked to undertake the current analysis of alumni and employers using a survey questionnaire that measures the success of the program in meeting these new educational objectives.
1.20 PROGRAM EDUCATIONAL OBJECTIVES

The alumni survey includes measures that are directly related to the Electrical Engineering program’s educational objectives. The objectives include:

Objective I: Professional Practice

Three to five years after graduation, our graduates will have achieved:

Employment in the electrical engineering field in various capacities including product design and development, field engineering, quality control, research and development, manufacturing, consulting, testing, project management, and technical marketing.

Objective II: Professional Growth

Three to five years after graduation, our graduates will have achieved:

Continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers.

Objective III: Professional Conduct

Three to five years after graduation, our graduates will have achieved:

Awareness of the social and ethical ramifications of their work.
2.00 **Methodology**

2.10 **Alumni Survey**

The alumni survey questionnaire was developed by faculty of the Department of Electrical and Computer Engineering and was mailed to 102 Electrical Engineering alumni who graduated in the years 2003 through 2008. A copy of the survey can be found in Appendix A. Several strategies were employed to increase the survey’s response rate:

- A postcard was mailed to alumni to announce that the survey would be arriving in the mail within a few days.
- The survey questionnaire, cover letter, and business reply envelope were mailed four days after the postcard. Alumni were able to complete the survey and return it in the postage paid business reply envelope or to complete the survey on-line.
- Two follow-up calls were made to alumni who did not complete a survey and a second survey was mailed to these individuals.
- A postcard was mailed two weeks later to invite those who did not respond to the survey to complete the survey on-line. A second postcard was mailed a week later.
- Department faculty made personal contact with alumni by telephone or email.

2.20 **Employer Survey**

To further measure the program’s success in satisfying its three educational objectives, an on-line employer survey was conducted of businesses that employ UMass Dartmouth Civil Engineering B.S. recipients who graduated between 2003 and 2008. Employer contact information was obtained from Electrical Engineering faculty and from the alumni surveys. A total of 25 employers were contacted by email and asked to complete the survey on-line. Follow-up calls and emails were made to employers who did not initially complete the survey to increase the response rate.

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2 The actual number of alumni for this period was 129. However, contact information was not available for all alumni.

3 A copy of the employer survey can be found in Appendix B.

4 The survey asked alumni to provide the name and contact information of their employer.
3.00 Alumni Survey Results

A total of 102 surveys were mailed to Electrical Engineering alumni from the Class of 2003 through the Class of 2008. Four surveys were returned because they did not have a deliverable address, thus 98 surveys were successfully mailed to alumni. A total of forty-one surveys were completed and returned by mail (N=16) and on-line (N=25), for a response rate of 42 percent. Results of the alumni survey follow.5

3.10 Year of Graduation

There is a relatively broad distribution of alumni in terms of year of graduation, with the highest percentage of alumni graduating in 2004 (32%) (see Table 1).

Table 1
Year of Graduation

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>3</td>
<td>7%</td>
</tr>
<tr>
<td>2004</td>
<td>13</td>
<td>32%</td>
</tr>
<tr>
<td>2005</td>
<td>7</td>
<td>17%</td>
</tr>
<tr>
<td>2006</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>2007</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>2008</td>
<td>6</td>
<td>15%</td>
</tr>
</tbody>
</table>

5 The sample includes one dual-major (electrical and computer engineering).
3.20 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE I: PROFESSIONAL PRACTICE**

3.21 **EMPLOYMENT STATUS AND CURRENT POSITION**

All forty-one alumni report that they are employed and six (15%) report that they are also enrolled in graduate school.

A third of alumni (33%) describe their current position as Product Design and Development, followed by “other” (23%), Project Management (13%), Research and Development (10%), Consulting (10%), Testing (5%), Manufacturing (3%), and Technical Marketing (3%) (see Table 2). “Other” position descriptions provided by alumni include Applications, Geothermal HVAC Engineering, Patent Examiner, Test Engineering, Technical Writing, and Utility.6

6 Two respondents did not provide a specific job category and one respondent is not working in an electrical engineering related field.

<table>
<thead>
<tr>
<th>Current Position</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Design &amp; Development</td>
<td>13</td>
<td>33%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>23%</td>
</tr>
<tr>
<td>Project Management</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Consulting</td>
<td>4</td>
<td>10%</td>
</tr>
<tr>
<td>Testing</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Technical Marketing</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>
3.22 Job Title

Alumni were asked to provide their specific job title. Results include:

- Alternative Energy Engineer
- Analog Electronics Design Engineer
- Applications Engineer
- Controls Engineer
- Customer Service Engineer
- Design Coordinator
- Distribution Engineer
- Electrical Engineer (N=6)
- Electrical Engineer II
- Electrical Engineer III
- Electrical Systems Engineer (N=3)
- Electromagnetic Compatibility Engineer
- Electronics Engineer
- Lead Electrical Engineer
- Outside Sales Representative
- Patent Examiner
- Product Engineer
- Program Manager (N=2)
- Research Engineer
- Senior Associate Utility Engineer
- Senior Department Head-Electrical Engineering
- Senior Electrical Engineer (N=2)
- Senior Electrical Engineer I
- Staff Engineer
- Substation Design Engineer
- Systems Engineer II - Reliability, Maintainability, and Availability
- Systems Safety Engineer
- Vice President of Operations
- Weapons Test Lead

3.23 Length of Employment with Current Employer

Sixty-eight percent of alumni (68%) report that they have worked for their employer for more than 3 years, while 3 percent have worked for their employer less than 6 months, 3 percent have worked 7 to 12 months, 8 percent have worked 1 to 2 years, and 20 percent have worked for 2 to 3 years (see Figure 1).

Figure 1

![Bar chart showing length of employment with current employer](image-url)
3.24 **NUMBER OF PEOPLE SUPERVISED**

Thirty-eight percent of alumni (38%) report that they supervise employees; 15 percent supervise 2 to 3 employees, 15 percent supervise 4 to 10 employees, 3 percent supervise 11 to 20 employees, 5 percent supervise 21 to 30 employees. No alumni supervise more than 30 individuals (see Figure 2).

![Figure 2](image)

3.25 **RESPONDENTS EMPLOYED IN A STEM (SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS) FIELD**

A large majority of alumni (88%) report that they are employed in a STEM field (science, technology, engineering, and mathematics) (see Figure 3).

![Figure 3](image)
3.30 **QUESTIONS RELATED TO OBJECTIVE II: PROFESSIONAL GROWTH**

3.31 **GRADUATE COURSES TAKEN SINCE GRADUATION**

Fifty-seven percent of alumni (57%) have taken graduate courses since their graduation from UMass Dartmouth; 15 percent have taken 3 to 6 credits, 5 percent have taken 7 to 12 credits, 10 percent have taken 13 to 20 credits, 17 percent have taken 21 to 30 credits, and 10 percent have taken more than 30 credits (see Figure 4). Seventeen percent of alumni (17%) have received a Masters of Engineering degree since their graduation from UMass Dartmouth, while 83 percent have not received another degree.

![Figure 4](Figure_4.png)

**How Many Graduate Course Credits Have You Taken Since You Graduated from UMass Dartmouth?**

3.32 **PROFESSIONAL DEVELOPMENT ENDEAVORS**

In terms of professional development, 83 percent of alumni report that they have attended short courses or workshops, 85 percent have attended training programs or conferences, 98 percent have assumed greater responsibility or leadership, or been promoted since their initial employment, and 35 percent have made a transition into another technical or professional career (see Figure 5).

![Figure 5](Figure_5.png)

**Percent Who Have Undertaken Various Professional Development Endeavors**
3.40 Questions Related to Objective III: Professional Conduct

3.41 Number of Professional Societies To Which Respondent is a Member

Thirty-four percent of alumni (34%) report that they are members of a professional society; 24 percent are members of one professional society and 10 percent are members of two professional societies (see Figure 6).

Figure 6

![Pie chart showing the distribution of professional society memberships](chart1.png)

3.42 Engagement in Voluntary Professional or Community Service Doing Tasks Related to Profession

Forty-two percent of alumni (42%) report that they have been engaged in voluntary professional or community service doing tasks related to their profession (see Figure 7).

Figure 7

![Pie chart showing the distribution of voluntary professional service](chart2.png)
3.43 Awareness of the Social and Ethical Ramifications of Professional Work

Ninety percent of alumni indicate that they are aware of the social ramifications of their professional work in their career (see Figure 8) and 95 percent indicate that they are aware of the ethical ramifications of their professional work in their career (see Figure 9).

Figure 8

In Your Career, Are You Aware of the Social Ramifications Of Your Professional Work?

- Yes: 90%
- No: 10%

Figure 9

In Your Career, Are You Aware of the Ethical Ramifications Of Your Professional Work?

- Yes: 95%
- No: 5%
4.00 Employer Survey

To further measure the program’s success in satisfying its three educational objectives, an on-line employer survey was conducted of businesses who have hired UMass Dartmouth Electrical Engineering B.S. recipients who graduated between 2003 and 2008. Employer contact information was obtained from program faculty and from graduates who completed the alumni survey and provided contact information for their employer.

A total of 25 employers were contacted by email or telephone and asked to complete the survey online. Follow-up calls and emails were made to employers who did not initially complete the survey to increase the response rate. A total of 14 surveys were completed for a response rate of 56.0 percent. These respondents employ a total of 46 UMass Dartmouth Electrical Engineering alumni, which represents 35.6 percent of the 129 alumni who graduated from 2003 to 2008.

Employers were asked to rate the UMass Dartmouth graduates they employ as a whole rather than individually. Results of the survey follow.

4.10 Business Background

Personnel from the following companies responded to the survey:

- Dialogic Corporation (N=2)
- Earth Sensitive Solutions, LLC
- Electric Boat Corporation
- EMC
- Garcia, Galuska, DeSousa, Inc.
- NSTAR
- PowerSecure, Inc.
- Raytheon (N=2)

Respondents hold a broad array of positions at these companies:

- Engineering Supervisor
- Manager II Systems Engineering
- Manager, Substation Design Engineering
- Principal
- Senior Technology Consultant Manager
- Software Engineer
- Systems Test Manager
- Vice President of Operations

Note: (Not all respondents provided business background information)
4.20 **Questions Related to Educational Objective I: Career Advancement**

A large majority of employers (86%) indicate that 100 percent of the UMass Dartmouth Electrical Engineering graduates they have employed in the last 3 to 5 years have a job title that falls in one of the categories included in Educational Objective 1. This figure represents 78 percent of the total alumni employed by respondents (see Figure 10).

Respondents were asked to list the job titles of employees who do not fall in one of the categories in Objective 1. These job titles include:

- Vice President of Operations
- Civil Engineer
- HVAC Engineer
- Systems Engineering

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7 These titles include product design and development, field engineering, quality control, research and development, manufacturing, consulting, testing, project management, and technical marketing.
4.30 **QUESTIONS RELATED TO EDUCATIONAL OBJECTIVE II: PROFESSIONAL GROWTH**

Seventy-nine percent of employers (79%) report that 100 percent of the UMass Dartmouth Electrical Engineering graduates they employ have demonstrated continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers. This figure represents 67 percent of the total alumni employed by respondents (see Figure 11).

**Figure 11**

![Bar chart showing percentage of employers and total alumni employed](chart)

What Percentage of the UMass Dartmouth Electrical Engineering Graduates That You Employ Have Demonstrated Continuous Career Improvement?

Specific examples cited by employers where UMass Dartmouth Electrical Engineering graduates have demonstrated continuous career improvement include:

- Employee is currently enrolled in the master’s degree program.
- Employee actively completes training in job related courses: Protocol Analysis and Measurement techniques.
- Employee began as a Project Manager and has worked his way up to leading Operations for our Distributed Generation Business Group.
- Graduates have gone from doing basic engineering to project management and project engineers.
- One of the two employees moved on to a government lab position. The other is now in a lead role. Both employees had or have been promoted. The one employee who is still active is in a graduate program.
4.40 Questions Related to Educational Objective III: Professional Conduct

All but one employer (93%) report that 100 percent of the UMass Dartmouth Electrical Engineering graduates they employ have demonstrated an awareness of the social and ethical ramifications of their work. This figure represents 87 percent of the total alumni employed by respondents (see Figure 12).

Specific examples where UMass Dartmouth Electrical Engineering graduates have demonstrated an awareness of the social and ethical ramifications of their work include:

- The products they develop are used to allow people to communicate at a lower cost. This enables more people to use electronic communications.
- Interactions by the employee in multicultural teams are a common occurrence within the current working environment. The employee operates very well in this diverse culture and has no issue integrating and assimilating as such.
- Work ethic has been excellent. Our company [will continue to employ] UMass grads.
- Employees are actively involved in ethical awareness programs and have had to deal with ethical issues that they needed to resolve, with regard to proper charging of time and truthfully dealing with issues that affect our customer.
- Our Mission Statement is embodied in our company name - Earth Sensitive Solutions.
4.50 **OVERALL PERFORMANCE**

Employers were asked to rate the performance of the UMass Dartmouth Electrical Engineering graduates that they employ. Ninety-three percent of employers (93%) rate the graduates they employ as excellent, while 7 percent rate the performance of graduates as very good (see Figure 13). These figures represent 87 percent and 13 percent of the total alumni employed by respondents respectively (see Figure 12). No employers rate the graduates they employ as satisfactory, fair, or unsatisfactory.

![Figure 13](image)

4.60 **ADDITIONAL COMMENTS**

Additional comments include:

- Employee is very professional and constantly motivated to complete job tasks on time and within budget.
- The engineering program remains at a high level.
- Both employees are knowledgeable with the fundamentals, proactive troubleshooters, and ethical.
APPENDIX A: ALUMNI SURVEY INSTRUMENT

I. Background Information

1. Your name:
   
   First/Personal: ___________________
   
   Last/Family: ___________________

2. Your email: (optional) ___________________

3. Your year of graduation from UMass Dartmouth: ________________

4. Your major while at UMass Dartmouth: - Choose One -
   
   o Computer Engineering
   o Electrical Engineering
   o Dual Major

II. Professional Practice

5. I am currently... (please check all that apply)
   
   o Employed
   o Enrolled in graduate school
   o Voluntarily unemployed
      
      How long have you been unemployed? ________________  [Please skip to Question 11]
   o Involuntarily unemployed
      
      How long have you been unemployed? ________________  [Please skip to Question 11]
   o Other __________

6. [If employed] I am currently working in...
   
   o Product design and development
   o Field engineering
   o Quality control
   o Research and development
   o Manufacturing
   o Consulting
   o Testing
   o Project management
   o Technical marketing
   o Other ___________________
UMass Dartmouth Electrical Engineering Program: Alumni and Employer Surveys

7. Your job title: ___________________________ (leave blank if you are unemployed)

8. How long have you worked for your present employer?
   - Less than 6 months
   - 7-12 months
   - 1 to 2 years
   - 2 to 3 years
   - More than 3 years

9. In your present job, how many individuals do you supervise?
   - None
   - 2-3 individuals
   - 4-10 individuals
   - 11-20 individuals
   - 21-30 individuals
   - More than 30 individuals

10. Are you employed in a STEM (science, technology, engineering and mathematics) field?
   - Yes
   - No

III. Professional Growth

11. How many graduate course credits have you taken since you graduated from UMass Dartmouth?
   - None
   - 3-6 credits
   - 7-12 credits
   - 13-20 credits
   - 21-30 credits
   - More than 30 credits

12. What is the highest degree you have completed since you graduated from UMass Dartmouth?
   - Another BS degree (in any field)
   - MS degree in engineering
   - MBA degree
   - Non-engineering MS degree
   - Ph.D. degree or equivalent
   - No other degrees received
13. Have you attended short courses or workshops either in your field or related to your job?
   - Yes
   - No activities

14. Have you attended any training programs or conferences either in your field or related to your job?
   - Yes
   - No

15. Have you assumed greater responsibility or leadership, or been promoted since your initial employment?
   - Yes
   - No

16. Have you made a transition into another technical or professional career?
   - Yes
   - No

IV. Professional Conduct

17. How many professional societies are you a member of?
   - None
   - One
   - Two
   - More than two

18. Have you ever been engaged in voluntary professional or community service doing tasks related to your profession?
   - Yes
   - No

19. In your career, are you aware of the social ramifications of your professional work?
   - Yes
   - No

20. In your career, are you aware of the ethical ramifications of your professional work?
   - Yes
   - No

OVER PLEASE
V. Employer Information

We are required to contact employers of UMass graduates as part of the accreditation process. While it is optional, providing the name of your employer and the name and telephone number or email address of a contact person to whom we may ask a few questions will help us considerably in the accreditation process. Preferably this contact person is someone who knows you well.

Keep in mind that all employer responses will remain strictly confidential and will be reported in aggregate only.

1. Your supervisor's information: *(leave these blank if you are unemployed)*

   Supervisor's name: __________________________

   Supervisor's email: __________________________

2. Your employer's / university's name: *(leave blank if you are unemployed or not in school)*

   Employer's/University's name____________________________

   Thank you for your assistance in this important project.

   Please return the questionnaire in the enclosed envelope or mail the survey to:
   Center for Policy Analysis
   University of Massachusetts Dartmouth
   285 Old Westport Rd.
   Dartmouth, MA 02747
APPENDIX B: EMPLOYER SURVEY INSTRUMENT

In order to maintain our accreditation with ABET, the Electrical & Computer Engineering Department must report on the performance of our B.S. degree recipients 3 to 5 years after graduation. Please respond to the questions below with respect to Department B.S. recipients you have hired within the last 3 to 5 years. If you employ both electrical and computer engineers, please evaluate one group at a time. You will have an opportunity to evaluate both during the survey.

Q1. How many UMass Dartmouth Electrical Engineering graduates have you employed within the last 3-5 years?

Please note: You will have an opportunity to evaluate Computer Engineering graduates later in the survey.

[If zero skip to Q6]

A. Program Educational Objectives

The ECE Department has developed three Program Educational Objectives (PEOs). Your feedback on the questions below will help us assess how well our graduates meet these PEOs.

OBJECTIVE I: PROFESSIONAL PRACTICE

Three to five years after graduation, our graduates will have achieved:

Employment in the electrical engineering field in various capacities including product design and development, field engineering, quality control, research and development, manufacturing, consulting, testing, project management, and technical marketing.

Q2. What percentage of the UMass Dartmouth Electrical Engineering graduates that you have employed in the last 3-5 years have a job title that falls in one of the categories listed in Objective 1 above?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

[If applicable] Please list the job titles of those who do not fall in one of the categories above:
UMass Dartmouth Electrical Engineering Program: Alumni and Employer Surveys

OBJECTIVE II: PROFESSIONAL GROWTH
Three to five years after graduation, our graduates will have achieved:

Continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers.

Q3. To your knowledge, what percentage of the UMass Dartmouth Electrical Engineering graduates that you employ have demonstrated continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

Can you provide some specific examples where UMass Dartmouth Electrical Engineering graduates have demonstrated continuous career improvement?

OBJECTIVE III. PROFESSIONAL CONDUCT

Three to five years after graduation, our graduates will have achieved:

Awareness of the social and ethical ramifications of their work.

Q4. To your knowledge, what percentage of the UMass Dartmouth Electrical Engineering graduates that you employ have demonstrated an awareness of the social and ethical ramifications of their work?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

Can you provide some specific examples where UMass Dartmouth Electrical Engineering graduates have demonstrated an awareness of the social and ethical ramifications of their work?
B. Overall Performance

Q5. Overall, how do you rate the performance of UMass Dartmouth Electrical Engineering graduates that you employ?

1. Excellent
2. Very Good
3. Satisfactory
4. Fair
5. Unsatisfactory
6. Too early to be judged

Please feel free to provide additional comments on the overall job performance of UMass Dartmouth Electrical Engineering graduates:

Q6. How many UMass Dartmouth Computer Engineering graduates have you employed within the last 3-5 years?

[If zero skip to Section C]

A. Program Educational Objectives

The ECE Department at UMass Dartmouth has developed three Program Educational Objectives (PEOs). Your feedback on the questions below will help us assess how well our graduates meet these PEOs.

OBJECTIVE I: PROFESSIONAL PRACTICE

Three to five years after graduation, our graduates will have achieved:

Employment in the electrical engineering field in various capacities including product design and development, field engineering, quality control, research and development, manufacturing, consulting, testing, project management, and technical marketing.

Q7. What percentage of the UMass Dartmouth Computer Engineering graduates that you have employed in the last 3-5 years have a job title that falls in one of the categories in Objective 1 above?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

Please list the job titles of those who do not fall in one of the categories above:
UMass Dartmouth Electrical Engineering Program: Alumni and Employer Surveys

OBJECTIVE II: PROFESSIONAL GROWTH

Three to five years after graduation, our graduates will have achieved:

Continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers.

Q8. To your knowledge, what percentage of the UMass Dartmouth Computer Engineering graduates that you employ have demonstrated continuous career improvement, evidenced by assumption of greater responsibility or leadership, promotion, participation in continuing education or graduate studies, or transition into other technical or professional careers?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

Can you provide some specific examples where UMass Dartmouth Computer Engineering graduates have demonstrated continuous career improvement?

OBJECTIVE III. PROFESSIONAL CONDUCT

Three to five years after graduation, our graduates will have achieved:

Awareness of the social and ethical ramifications of their work.

Q9. To your knowledge, what percentage of the UMass Dartmouth Computer Engineering graduates that you employ have demonstrated an awareness of the social and ethical ramifications of their work?

1. 100%
2. 80-99%
3. 60-79%
4. 40-59%
5. 20-39%
6. 1-19%
7. 0%

Can you provide some specific examples where UMass Dartmouth Computer Engineering graduates have demonstrated an awareness of the social and ethical ramifications of their work?
B. Overall Performance

Q10. Overall, how do you rate the performance of UMass Dartmouth Computer Engineering graduates that you employ?

1. Excellent
2. Very Good
3. Satisfactory
4. Fair
5. Unsatisfactory
6. Too early to be judged

Please feel free to provide additional comments on the overall job performance of UMass Dartmouth Computer Engineering graduates:

C. Background Information

The information below will assist us in determining the types of companies that employ UMass Dartmouth graduates. Again, please be assured that all information is confidential and personal information will not be reported.

Your Name: ____________________________

First/Personal: ____________________________

Last/Family: ____________________________

Your company's name: ____________________________

Your company's address: (Optional; enter as you would a mailing address): ____________________________

Work phone number: (Optional; include your area code please): ____________________________

Your email: ____________________________

Your job title: ____________________________