Executive Summary

This document summarizes the results of a Computer Science alumni survey distributed during Fall quarter 2009. Alumni and employer surveys are issued approximately once every three years to assess performance against Educational Objectives.

Educational Objectives are broad statements that describe the career and professional accomplishments that the program prepares students to achieve post-graduation, whereas Program Outcomes are narrower statements that describe the abilities that students should have at the time of graduation. Program Outcomes are assessed by a variety of mechanisms as described in the department Assessment Plan. While Program Outcomes have been defined for all degrees offered by the department, Educational Objectives have been defined only for the Bachelor of Science in Computer Science. The alumni survey was nevertheless targeted to all Computer Science graduates with a known address who graduated with the BSCS, BSCIS, BACS, or MSCS degrees during the preceding six years, i.e. those graduating during
academic years 2003/04 to 2008/09. The total number of surveys distributed was 372, with 55 responses received at the time this report was prepared. The survey instrument is shown in Appendix A.

Survey responses to each question are summarized in the sections that follow for each of the following four groups. Respondents with the BSCS degree were grouped for separate assessment because that degree is accredited by ABET.

1. All respondents.  
   \( N = 47 \) to 55, depending on the question.

2. All respondents graduating with a Bachelor’s degree in Computer Science three or more years ago.  
   \( N = 32 \) to 40, depending on the question.

3. All respondents graduating with the Bachelor of Science in Computer Science.  
   \( N = 25 \) to 27, depending on the question.

4. All respondents graduating with the Bachelor of Science in Computer Science three or more years ago.  \( N = 16 \) to 18, depending on the question.

The survey results indicate that the department is performing well against Educational Objectives across all degrees as well as with BSCS graduates. Responses relating to communication skills (Educational Objective 5) provide evidence of recent improvement in this area, which has also been noted in recent Program Outcome assessments relating to communication skills. No deficiencies were noted and thus no corrective actions are proposed by the department’s assessment committee.

**Educational Objective 1 - Our students will be prepared to grow their roles in the community and the organization that employs them.**

The first part of this objective (the community) was assessed by survey question 7, with the following results:

![Graph showing responses to question 7: My role in my community has grown since the time I received my Bachelor's degree.](image)
For those answering no, question 8 asked what prevented their role in the community from growing. The results for those respondents are shown in the following chart:

Over 78% of graduates in each category have grown their role in their community. No graduates expressed an inability to adapt to opportunities to grow their role in the community. We therefore conclude that we are adequately preparing our graduates to grow their roles in their community.

The second half of this objective (advancing their careers) was assessed by survey question 9, with the following results. The totals are greater than 100% because one respondent answered both yes and no to this question, and was counted in both response categories. That respondent indicated that his career has advanced in terms of monetary compensation but “not really” in terms of “job title / position.”
For those answering no, question 10 asks what prevented their career from advancing. The results for those respondents are shown in the following chart:

Over 92% of graduates in each category have advanced their careers. Only one respondent (a BSCS graduate appearing in all 4 groupings) expressed an inability to adapt to opportunities to advance their career. We therefore conclude that we are adequately preparing our graduates to advance their careers.

**Educational Objective 2 - Our students will be prepared to pursue and apply lifelong learning.**

This objective was assessed by survey question 11, with possible responses of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD):
Over 91% of the graduates in each group agreed with the statement, and no graduates disagreed. We therefore conclude that we are preparing our students to pursue and apply lifelong learning.

**Educational Objective 3 - Our students will be prepared to act on the recognition that all decisions have an impact on the organization and customer.**

This objective was assessed by survey question 2, with possible responses of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD), and Not Applicable (NA): 

Over 87% of the graduates in each category agreed that their decisions have an impact on their organization and its customers. Very few disagreed with the statement. We therefore conclude that we are adequately preparing our students to act on the recognition that the decisions they make at work have an impact on the organization and its customers.

**Educational Objective 4 - Our students will be prepared to contribute with an understanding that there is more to a product than software, and product development is an ongoing process.**

This objective was assessed by survey questions 3 and 4, with possible responses of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD). Question 3 also allowed a response of Not Applicable (NA), but none of the respondents used it.
Over 97% of the graduates in each category agree with the statement and none disagreed with it. We therefore conclude that our graduates are prepared to contribute with an understanding that there is more to a product than software.

Over 95% of the graduates in each category agreed with the statement and none disagreed with it. We therefore conclude that our graduates are prepared to contribute with an understanding that product development is an ongoing process.
Educational Objective 5 - Our students will be prepared to communicate with non-technical, as well as technical, people and to discuss customer needs at the customer’s level.

This objective was assessed by survey question 5, with possible responses of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).

Over 83% of the graduates in each category agreed with the statement and none disagreed with it. The higher rate of agreement for All graduates and All BSCS compared with those groups holding degrees for 3 or more years provides evidence that the department has recently made gains in improving the communication skills of its graduates. This is likely due to increased attention to project presentations and written communication on ethics. We have noted similar improvements in Program Outcome assessments of ethics essays. We conclude that our graduates are adequately prepared to communicate with non-technical people.

Educational Objective 6 - Our students will be prepared to expand their technical competence beyond the fundamentals in areas such as software and interface development, databases, concurrent systems, systems integration, and software components of computer science.

This objective was assessed by survey question 12, with possible responses of Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).
Over 93% of the graduates in each category agreed with the statement and none disagreed with it. The increased rate of agreement for graduates holding the undergraduate degree for three or more years is reasonable and expected for this question. We therefore conclude that our graduates are prepared to expand their technical competence beyond the fundamentals that they learn as undergraduates.
1) Which degree(s) did you earn at EWU (check all that apply):
   a) Bachelor of Science in Computer Science
   b) Bachelor of Science in Computer Information Systems
   c) Bachelor of Arts in Computer Science, 3D Animation and Gaming Option
   d) Bachelor of Arts in Computer Science, Multimedia and Web Programming Option
   e) Bachelor of Arts in Computer Science, Theory Option
   f) Master of Science in Computer Science
   g) Master of Science, Interdisciplinary
   h) Other

2) The decisions I make at work have an impact on my organization and its customers.
   a) Strongly Agree
   b) Agree
   c) Neutral
   d) Disagree
   e) Strongly Disagree
   f) Not Applicable

3) My organization's relationship with its customers involves more than the delivery of a piece of software.
   a) Strongly Agree
   b) Agree
   c) Neutral
   d) Disagree
   e) Strongly Disagree
   f) Not Applicable

4) Product development is an ongoing process.
   a) Strongly Agree
   b) Agree
   c) Neutral
   d) Disagree
   e) Strongly Disagree

5) I am able to communicate effectively with non-technical people.
   a) Strongly Agree
   b) Agree
   c) Neutral
   d) Disagree
   e) Strongly Disagree

Please turn over the page to complete the survey. Thank you.
6) How many years has it been since you received your Bachelor’s degree in Computer Science from EWU?

7) My role in my community has grown since the time I received my Bachelor’s degree.
   a) Yes
   b) No

8) If your role in your community has not advanced, what has prevented it from doing so? Choose all that apply:
   a) There has been no opportunity for advancing my role in my community
   b) I have been unable to adapt to the opportunities presented
   c) My personal life interferes with opportunities to grow my role in the community
   d) I have no desire to grow my role in my community
   e) Other (please specify): ____________________________

9) My professional career has advanced since the time I received my Bachelor’s degree.
   a) Yes
   b) No

10) If your career has not advanced, what has prevented it from doing so? Choose all that apply:
    a) There has been no opportunity for advancement
    b) I have been unable to adapt to the opportunities presented
    c) My personal life interferes with my opportunities for advancement
    d) I have no desire to advance
    e) Other (please specify): ____________________________

11) I have continued to learn since the time I received my Bachelor’s degree.
    a) Strongly Agree
    b) Agree
    c) Neutral
    d) Disagree
    e) Strongly Disagree

12) I have expanded my technical knowledge beyond the fundamentals that I acquired as an undergraduate student at EWU.
    a) Strongly Agree
    b) Agree
    c) Neutral
    d) Disagree
    e) Strongly Disagree