MICHIGAN TECHNOLOGICAL UNIVERSITY
COOPERATIVE EDUCATION
2013 - 2014
COOPERATIVE EDUCATION AT MICHIGAN TECH

• For academic credit
  - undergraduate: 1 or 2 credits
  - graduate: 1 – 6 credits
• Registration, Assignments, Letter grade
• Different than an internship
• *Transformative Learning*
  - learn, do, reflect
STUDY

• The co-op course is in Canvas
• Forced survey
• 38 Likert Scale questions and a space for written comments
• Nearly 200 students participated on co-op during the fall 2013 and spring 2014 semesters
• Students performed a co-op with 77 different companies
• 14 corporate partners had at least one co-op student
STUDY

- 35% Mechanical Engineering
- 24% Chemical Engineering
- 13% Computer and Electrical Engineering
- 11% Civil and Environmental Engineering
- 5% or less for all other majors
1. The co-op experience provided me the ability to apply knowledge of mathematics, science, or engineering.
2. The co-op experience provided me with the ability to design and conduct experiments and analyze and interpret data.
3. The co-op experience provided me with the ability to design a system, component, or process to meet desired needs.
4. The co-op experience provided me with the ability to work on multi-disciplinary teams at the work site.
5. The co-op experience provided me with the ability to identify, formulate, and solve problems.
6. The co-op experience provided me with understanding of professional and ethical responsibility.
7. The co-op experience provided me knowledge of contemporary issues in my field and industry.
8. Overall, I believe that my co-op assignment has prepared me for future employment.
9. Overall, this co-op experience has helped me to better discern my career path.
10. I feel that I made strong professional networking contacts while on co-op.
The chart represents the scores for 'Engineering/Professional Experience' across different questions. The scores range from 4.16 to 4.59, with a notable cluster around 4.2 to 4.4. The graph shows a slight upward trend from question 1 to question 11.
ENGINEERING/PROFESSIONAL EXPERIENCE

1. The co-op experience provided me the ability to apply knowledge of mathematics, science, or engineering.
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Engineering/Professional Experience

SCORE

QUESTION

1 2 3 4 5 6 7 8 9 10 11

4.16 4.2 4.04 4.32 4.49 4.55 4.28 4.59 4.44 4.26 4.333

The score for question 8 is circled, indicating a particular focus on this aspect.
1. The co-op experience provided me the ability to apply knowledge of mathematics, science, or engineering.
2. The co-op experience provided me with the ability to design and conduct experiments and analyze and interpret data.
3. The co-op experience provided me with the ability to design a system, component, or process to meet desired needs.
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10. I feel that I made strong professional networking contacts while on co-op.
EMPLOYER SUPPORT

1. At my place of employment my fellow workers were friendly and cooperative.
2. At my place of employment the supervisory staff was reasonable, sincere, and fair.
3. I felt that my supervisor was supportive.
4. I felt that my employer was supportive.
5. My employer was helpful in locating housing.
EMPLOYER SUPPORT

1. At my place of employment my fellow workers were friendly and cooperative.
2. At my place of employment the supervisory staff was reasonable, sincere, and fair.
3. I felt that my supervisor was supportive.
4. I felt that my employer was supportive.
5. My employer was helpful in locating housing.
Co-op Onboarding and Student Contribution

SCORE

QUESTION

1. 4.08
2. 4.44
3. 4.41
4. 4.1
5. 3.95
6. 4.12
7. 4.18
CO-OP ONBOARDING AND CONTRIBUTION

1. My employer derived maximum use of the student personnel.
2. Overall, I feel that my co-op work added value to the company.
3. Overall, I feel that I was valued as an employee of the company.
4. Overall, I feel that the employer's co-op program was well organized.
5. The employer's program was set up so I could contribute immediately.
6. The employer's orientation to the company and co-op assignment was effective and timely.
Co-op Onboarding and Student Contribution

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.08</td>
</tr>
<tr>
<td>2</td>
<td>4.44</td>
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<tr>
<td>3</td>
<td>4.41</td>
</tr>
<tr>
<td>4</td>
<td>4.1</td>
</tr>
<tr>
<td>5</td>
<td>3.95</td>
</tr>
<tr>
<td>6</td>
<td>4.12</td>
</tr>
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CO-OP ONBOARDING AND CONTRIBUTION

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2. Overall, I feel that my co-op work added value to the company.
3. Overall, I feel that I was valued as an employee of the company.
4. Overall, I feel that the employer's co-op program was well organized.
5. The employer's program was set up so I could contribute immediately.
6. The employer's orientation to the company and co-op assignment was effective and timely.
SOCIAL LIFE

1. I was able to connect with other co-op students or people my age at work.
2. I was able to connect with other co-op students or people my age in the community.
3. My employer organized effective social events.
4. The location of the co-op assignment provided me with opportunities to be social and have fun.
5. I feel that I made close friends while on co-op.
Prospects

SCORE

QUESTION

1 2 3 4 5 6

4.22 4.43 4.15 3.23 3.77 3.96
PROSPECTS

1. The opportunities for employment with the co-op employer after graduation are positive.
2. I recommend that another student in my major participate in a co-op at this company.
3. Overall, I recommend that any student co-op with this company.
4. If I had the choice I would live at the location of the co-op assignment.
5. I would like to work for this company as a full time employee upon graduation, regardless of the possibility of such an idea.
Prospects

The diagram shows the following scores for different questions:

- Question 1: 4.22
- Question 2: 4.43
- Question 3: 4.15
- Question 4: 3.23
- Question 5: 3.77
- Question 6: 3.96

The scores are indicated on a scale from 1 to 5.
1. The opportunities for employment with the co-op employer after graduation are positive.
2. I recommend that another student in my major participate in a co-op at this company.
3. Overall, I recommend that any student co-op with this company.
4. If I had the choice I would live at the location of the co-op assignment.
5. I would like to work for this company as a full time employee upon graduation, regardless of the possibility of such an idea.
ACADEMIC VALUE

1. My employer provided an educationally meaningful experience.
2. My employer provided progression in responsibility consistent with student growth.
3. The co-op experience provided me with the recognition of the need for and ability to engage in life-long learning.
4. Overall, I believe that my employer's co-op program has prepared me for my future academic courses.
5. Overall, I feel that this co-op assignment directly connected to my academic major.
Academic Value

<table>
<thead>
<tr>
<th>Score</th>
<th>Question</th>
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<tbody>
<tr>
<td>4.49</td>
<td>1</td>
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<tr>
<td>4.33</td>
<td>2</td>
</tr>
<tr>
<td>4.48</td>
<td>3</td>
</tr>
<tr>
<td>4.06</td>
<td>4</td>
</tr>
<tr>
<td>4.272</td>
<td>5</td>
</tr>
</tbody>
</table>

The score for Question 4 is the lowest at 4.06.
1. My employer provided an educationally meaningful experience.
2. My employer provided progression in responsibility consistent with student growth.
3. The co-op experience provided me with the recognition of the need for and ability to engage in life-long learning.
4. Overall, I believe that my employer's co-op program has prepared me for my future academic courses.
5. Overall, I feel that this co-op assignment directly connected to my academic major.
CONCLUSION

• Students feel supported by you
• Most students had learning experiences and felt that they contributed to the team
• Students are exiting the experience feeling prepared to enter the work force
• Students would like more help in finding housing
• Students would like to contribute immediately and have more direction
• Location and social life matter, but the work seems to have a greater impact
FUTURE

• Individualized reports and FERPA
• Graduate student data
• More students equals more data

QUESTIONS?
<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>AVG</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>My employer provided an educationally meaningful experience.</td>
<td>4.49</td>
<td>4.58</td>
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<tr>
<td>My employer provided opportunities for self-improvement.</td>
<td>4.33</td>
<td>4.33</td>
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<tr>
<td>At my place of employment, my fellow workers were friendly and cooperative.</td>
<td>4.71</td>
<td>4.67</td>
</tr>
<tr>
<td>At my place of employment, the supervisor was respectful, sincere, and fair.</td>
<td>4.73</td>
<td>4.83</td>
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<tr>
<td>My employer allowed maximum use of the student personnel.</td>
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<td>3.67</td>
</tr>
<tr>
<td>The opportunity for employment after graduate school is positive.</td>
<td>4.22</td>
<td>4</td>
</tr>
<tr>
<td>The MIT career counselors are helpful and supportive throughout the co-op assignment.</td>
<td>3.83</td>
<td>3.58</td>
</tr>
<tr>
<td>Using Contacts for the Coop Program was beneficial.</td>
<td>3.34</td>
<td>2.70</td>
</tr>
<tr>
<td>The co-op experience provided me the ability to apply knowledge of mathematics, science, or engineering.</td>
<td>4.16</td>
<td>4.09</td>
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<tr>
<td>The co-op experience provided me the ability to design and conduct experiments and analyze and present data.</td>
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<td>The co-op experience provided me with knowledge of contemporary issues in my field and industry.</td>
<td>4.28</td>
<td>4.33</td>
</tr>
<tr>
<td>Difficulties were supportive.</td>
<td>4.65</td>
<td>4.67</td>
</tr>
<tr>
<td>Difficulties were not supportive.</td>
<td>4.63</td>
<td>4.5</td>
</tr>
<tr>
<td>Overall, I felt that my co-op work added value to the company.</td>
<td>4.44</td>
<td>4.42</td>
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<td>Overall, I felt that I was valued as an employee of the company.</td>
<td>4.41</td>
<td>4.42</td>
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<td>Overall, I felt that the employer’s co-op program was well organized.</td>
<td>4.1</td>
<td>4.25</td>
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<tr>
<td>The employer’s program was set up so that it could contribute immediately.</td>
<td>3.95</td>
<td>3.75</td>
</tr>
<tr>
<td>The employer’s orientation to the company and co-op experience was effective and realistic.</td>
<td>4.12</td>
<td>4.08</td>
</tr>
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<td>Overall, I believed that my employer’s co-op program had prepared me for my future academic pursuits.</td>
<td>4.</td>
<td>4.17</td>
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<td>4.59</td>
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<tr>
<td>Overall, the co-op experience helped me to better discern my career path.</td>
<td>4.44</td>
<td>4.42</td>
</tr>
<tr>
<td>Overall, I felt that the co-op assignment did not contribute to my academic major.</td>
<td>4.06</td>
<td>4.17</td>
</tr>
<tr>
<td>I recommend that another student majoring in my area participate in a co-op at this company.</td>
<td>4.43</td>
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<td>Overall, I recommend that any student co-op with this company.</td>
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<td>I was able to connect with other co-op students or people my age at work.</td>
<td>4.14</td>
<td>3.83</td>
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<td>I was able to connect with other co-op students or people my age in the community.</td>
<td>3.41</td>
<td>3.55</td>
</tr>
<tr>
<td>I felt motivated, discouraged, or hopeless when on co-op. (Remember that 5 is strongly agree and 1 is strongly disagree.)</td>
<td>1.97</td>
<td>1.92</td>
</tr>
<tr>
<td>My employer was helpful in locating housing.</td>
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<td>3.67</td>
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<td>If I had the choice, I would live at the location of the co-op assignment.</td>
<td>3.23</td>
<td>3.17</td>
</tr>
<tr>
<td>I felt that moral professional standards were upheld while on co-op.</td>
<td>4.26</td>
<td>4.08</td>
</tr>
<tr>
<td>I felt that my co-op experience was respected.</td>
<td>3.74</td>
<td>3.33</td>
</tr>
<tr>
<td>I would like to work for this company as a full-time employee upon graduation, regardless of the availability of such work.</td>
<td>3.77</td>
<td>4.17</td>
</tr>
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</table>