RESULTS

Tracking Graduates and Alumni:

Out of the 16 BS students graduated during the review period, we were able to track job placement for 13 of them (Figure 1). These numbers show that Geography students are getting good jobs related to their field, are staying in Alaska, and are bringing benefit to the State.

Of the 13 of 16 students who we were able to track:
- 12 are in fields directly related to their degree program including 1 in graduate school.
- 8 are employed in geospatial fields.
- 3 are employed in science education.
- 1 is attending graduate school in related field
- 9 are employed in Alaska.

Figure 1. Results from survey of students that graduated from UAF with a BS in Geography during the review period.
Figure 2. Breakdown of job category of students entering fields directly related to their BS Geography degree. The graph clearly shows the importance of Geospatial Science and the demand for these students in the workforce. The BS Geography — Geospatial Sciences directly addresses this demand and is the most popular BS track in the program.

Here are the specific job placements for those doing work related to their Geography BS degree:

- Fish & Wildlife Technician II, AK Dept. of Fish & Game.
- Business Development at LeadDog Consulting (GIS map data services)
- Survey Technician, TerraSond Limited
- Graduate Research Technician, Snow & Ice & Permafrost, Geophysical Institute, UAF; MS candidate, Geology & Geophysics, UAF.
- Hydrographic Survey Technician, TerraSond Limited.
- Engineering Assistant II, Alaska Department of Transportation.
- Earth Science Research Consultant, NASA; and Science Lab Instructor, Holy Rosary School.
- Education and Outreach Program Assistant, International Arctic Research Center, UAF.
- Survey Technician at TerraSond Limited
- Physical Science Technician with the US Geological Survey, Geosciences and Environmental Change Science Center.
- Visitor Liaison, Japan Tourism Bureau, Hokkaido, Japan.
- Science Instructor, Montana Outdoor Science School.

Workforce Development:
During the review period we have had 13 students enrolled in either Internships (GEOG 300), Undergraduate Research (GEOS 488), or employed in a field directly related to Geography while enrolled as a student (Table 1). The below table highlights these students and the Agencies and Organizations the Geography Program partnered with to prove these student opportunities. The current curriculum now requires all Geography BS students to enroll in GEOG 300 or GEOS 488 so these numbers will increase as will the partnerships we are developing. This provides students with the necessary skills and employee contacts to enter the workforce or continue onto graduate school upon graduation from the program.
Table 1. Geography students participate in a variety of Internships or undergraduate research projects. Students are also directly employed while seeking their degrees. The table shows the type of workforce development and the Agency or Business Partner involved. Geography has formed numerous partnerships with State, Federal, and local organizations to provide students with these opportunities.

<table>
<thead>
<tr>
<th>Student</th>
<th>Internship or Undergrad Research/Employment</th>
<th>Degree Program</th>
<th>Agency or Business Partner</th>
<th>Term</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Internship</td>
<td>BS</td>
<td>Alaska Department of Fish &amp; Game</td>
<td>SP14</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>PhD project research assistant: Remote sensing techniques to detect and map geo-hazards such as landslides and avalanches in Whittier and Seward</td>
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</tr>
<tr>
<td>2</td>
<td>Internship</td>
<td>BS</td>
<td>Charlotte County, FL: Special Projects Division</td>
<td>SU14</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Internship</td>
<td>BS</td>
<td>ASRC Federal Mission Solutions</td>
<td>SU16</td>
<td>Led to a job offer from ASRC and option of financial support for graduate work.</td>
</tr>
<tr>
<td>4</td>
<td>Internship</td>
<td>BS</td>
<td>Gates of the Arctic/Yukon-Charley Rivers National Park and Preserve</td>
<td>SU16</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Internship</td>
<td>BS</td>
<td>Geographic Information Network of Alaska (GINA)</td>
<td>F16</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Internship</td>
<td>GIS Minor</td>
<td>Geographic Information Network of Alaska (GINA)</td>
<td>F16</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Internship</td>
<td>BS</td>
<td>Alaska Satellite Facility.</td>
<td>F16</td>
<td>His supervisor has offered Aidan a job following graduation, and the option of full RA support to pursue a Masters or PhD at UAF.</td>
</tr>
<tr>
<td>8</td>
<td>Research/Employment</td>
<td>BS</td>
<td>Division of Geological and Geophysical Surveys</td>
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<tr>
<td>9</td>
<td>Research/Employment</td>
<td>BS</td>
<td>Arctic Coastal Geoscience Lab</td>
<td></td>
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<tr>
<td>10</td>
<td>Research/Employment</td>
<td>BS</td>
<td>Arctic Coastal Geoscience Lab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Research/Employment</td>
<td>BS</td>
<td>Geographic Information Network of Alaska</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Research/Employment</td>
<td>BS</td>
<td>Museum of the North</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Research/Employment</td>
<td>BS</td>
<td></td>
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</tbody>
</table>
EXAMPLES OF RUBRICS AND OTHER ASSESSMENT TOOLS FOR GEOGRAPHY DEGREE SLOA

Examples are shown on the following pages.
Example: Written work Rubric

<table>
<thead>
<tr>
<th></th>
<th>Yes (excellent)</th>
<th>Somewhat (adequate)</th>
<th>No (inadequate)</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the work represent the student’s own scientific research?</td>
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<td>2. Does the work discuss the significance of the student’s research?</td>
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<td>3. Does the work clearly articulate the student’s research goals?</td>
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<tr>
<td>4. Are the methods appropriate given the student’s research agenda?</td>
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<tr>
<td>5. Is the data analysis appropriate and accurate?</td>
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<tr>
<td>6. Are the results clearly and presented and interpreted?</td>
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<tr>
<td>7. Are the implications of the results clearly presented?</td>
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<tr>
<td>8. Are the tables clear, effective, and properly formatted?</td>
<td></td>
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<tr>
<td>9. Are the figures clear, effective and properly captioned?</td>
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<td>10. Does the literature review sufficiently recognize prior work in the field?</td>
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<tr>
<td>11. Are the citations presented consistently in the text and references?</td>
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<tr>
<td>12. Is the writing appropriate for the target audience?</td>
<td></td>
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<tr>
<td>13. Is writing clear, direct, and free of language errors?</td>
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<td></td>
</tr>
</tbody>
</table>

# Summary of Poster Presentation Grades (GEOG 111x Fall 2016)

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoring</td>
<td></td>
<td>9.0 - 10.0</td>
<td>8.0 – 8.9</td>
<td>7.0 – 7.9</td>
<td>6.0 – 6.9</td>
<td>0.0 – 5.9</td>
</tr>
</tbody>
</table>

- **Organization**
  - The below information needs to be included to receive all ten points in the category. Missing or incomplete portions may result in fractional points.
  - **pts ______**
  - Logical flow to poster:
    - Title
    - Introduction
    - Proposed Methods
    - Preliminary Data/Results (if any)
    - Expected Conclusions
    - Acknowledgements
    - References
  - Comments:

- **Background**
  - 1. Review of important literature
  - 2. Rationale
  - 3. Central question that will be examined
  - 4. Can answer questions
  - **pts ______**
  - Comments:

- **Methods**
  - 1. Briefly explain the techniques used or will be used
  - 2. Briefly explain protocols for experiments that were/will be used (Only enough info needs to be shown as to allow readers to follow)
  - **pts ______**
  - Comments:

- **Conclusions**
  - 1. Summary of results (if any)
  - 2. Future directions or predictions for future outcomes
  - **pts ______**
  - Comments:

- **Poster Presentation**
  - 1. Graphs/Tables/pictures clearly explained and presented
  - 2. Graphs have appropriate labels/titles
  - 3. Figures have descriptive captions, tables have descriptive labels
  - **pts ______**
  - Comments:

- **Poster Style**
  - 1. Spelling/grammar
  - 2. Appropriate labeling
  - 3. Appropriate amount and size of text on poster
  - 4. Contrast and color/size of poster
  - 5. Professional appearance of poster
  - **pts ______**
  - Comments:

- **Presentation Style**
  - 1. Eye contact while presenting
  - 2. Refrain from reading poster directly
  - 3. Professional attire
  - **pts ______**
  - Comments:

**Points:** Fractional points may be given in any category. Please list your points for each category in the left box. The total of this form should be 80 points. The coordinator will total the points on the form.
Example: Oral Presentation Rubric

Oral/Visual Presentation Rubric, GEOG 490

<table>
<thead>
<tr>
<th></th>
<th>Excellent (10)</th>
<th>Good (8)</th>
<th>Average (7)</th>
<th>Adequate (6)</th>
<th>Poor (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Appropriate and substantial content? (Displays thorough grasp of subject matter?)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Engaging presentation?</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Clear organization?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Good use of graphics/images?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Creativity of images, arrangement, media?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>Talk complements, rather than duplicates visuals?</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Adequate energy level?</td>
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<td></td>
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<tr>
<td>8</td>
<td>Relaxed and confident?</td>
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</tr>
<tr>
<td>9</td>
<td>Does the student effectively interact with the audience?</td>
<td></td>
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</tr>
<tr>
<td>10</td>
<td>Confident and appropriate response to questions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>TOTALS</td>
<td></td>
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</tbody>
</table>

Comments:
EXAMPLE: Undergraduate Exit Survey (We plan to incorporate this survey online in conjunction with the Geoscience Department)

Geography Degree (circle one)

BA  BS-Environmental Studies  BS-Geospatial Sciences  BS-Landscape Analysis & Climate Change Studies

What semester and year are you Graduating?

How many years did you spend in our program?

Were you a full time or part time student?

Did you transfer from another institution?

What semester did you transfer?

What is your plan after graduating?
   a. industry job related to geography/geospatial sciences/resource management
   b. agency/nonprofit job related to geography/geospatial sciences/resource management
   c. informal science education/teaching
   d. K12 teaching job for geography/geospatial sciences/other
   e. community college faculty job in geography/geospatial sciences/other
   f. continuing for another degree in geography or related field at UAF/another institution
   g. job unrelated to geology/geophysics (comment box)
   h. other (please specify)

What inspired you decision to declare a Geography major? (mark as many as apply) I took

   Geography 101x.
   I took Geography 111x.
   I took Geography 302.
   I took an introductory geography course at another institution.
   I took a summer program in high school or college. Which one? I decided because of my high school classes/teachers.
   I decided based on media representations of geography concepts (such as newspaper articles, television, movies) Which one?
   My parent or other close family member encouraged me to consider geography.
   A friend inspired me to consider geography.
   Other.
   COMMENT BOX (for all)

How were you supported during your time at UAF? (click or mark all that apply):

   My family provided financial support.
   I took out student loans.
   I received a scholarship.
   I had a job to pay for school.
   If possible, please provide rough percentages for how your were supported (for example 25% from family, 50% student loans, 25% scholarships).

   COMMENT BOX
Please state whether you strongly agree to strongly disagree with these statements. Please provide comments to help us improve each situation.

1. The undergraduate program was well suited to my personal or professional goals.
   a. Comment Box

2. My employment is directly related to my degree/concentration in the geography program.
   a. Comment Box

3. My degree/concentration is relevant to geography employment opportunities.
   a. Comment Box

4. The program prepared me for employment in a geography-related field.
   a. Comment Box

5. I would recommend the program to another student.
   a. Comment Box

6. I would recommend my academic advisor to another student.
   a. Comment Box

7. I was active in the Geography Club.
   a. Comment Box

8. The Geography Club provided a valuable community/friends/study partners to make my undergraduate experience better.
   a. Comment Box

9. I feel well prepared to face expected professional challenges.
   a. Comment Box

10. The quality of undergraduate instruction in the program was high.
    a. Comment Box

11. The undergraduate instruction in the program provided the right breadth and depth of content so that I felt confident in conversing with colleagues.
    a. Comment Box

12. Equipment in labs was modern, functional, available, and adequate for our lab assignment needs
    a. Comment Box

13. The computer room computers and software were adequate and available for my needs.
    a. Comment Box

14. I took advantage of opportunities for undergraduate research at UAF.
    a. Comment Box

15. My undergraduate research mentor was supportive and provided a valuable experience.
    a. Comment Box

16. I was able to find summer jobs or internships in geography.
    a. Comment Box

17. The faculty were helpful in my finding summer jobs or internships in geography.
    a. Comment Box

18. The faculty in the program provided the mentoring I needed to find and apply an appropriate post graduation positions (whether academic, industry, agency, or other).
    a. Comment Box
Please provide any additional comments or suggestions about your experience in the program that will help us improve in the future.
   1. The best part of my undergraduate experience was (comment box).
   2. If I could change one thing in the undergraduate program that would be (comment box).