Atmospheric Sciences AY2012 (2011/2012)

**Mission:** The University of Alaska Fairbanks (UAF) Department of Atmospheric Sciences (DAS) provides students at the masters and doctorate levels with the training and insight to understand and explore physical, chemical and dynamical processes of the atmosphere, to prepare them for professional careers in the various fields of atmospheric sciences and meteorology in research, education, consulting, supporting or the weather service.

**Certificate and degree programs:** DAS offers MS and PhD degree programs in atmospheric sciences.

**Locations:** All graduate students are located on the third or fourth floor of the Akasofu Building on the Fairbanks campus. All faculty offices are on the third floor of the Akasofu Building.

**Student and faculty numbers:** During AY2012 the DAS have the following numbers of students and faculty members:

<table>
<thead>
<tr>
<th>MS graduate students</th>
<th>PhD graduate students</th>
<th>Total # of faculty members</th>
<th>FTE</th>
<th>TA</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>13</td>
<td>5</td>
<td>1.75</td>
<td>1.00</td>
<td>0.5</td>
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All faculty members have joint appointments with either the Geophysical Institute (GI) or International Arctic Research Center (IARC). DAS is supported by associated and affiliated research faculty. Three MS graduated during AY11. Two are employed as meteorologists with the National Weather Office in Alaska and California, respectively. The Student Learning Outcome Assessment procedure shows that DAS is successful in providing useful education in atmospheric sciences and preparing its students for professional careers in their fields.

**Weaknesses:** There are more opportunities in the issues of climate and air quality research in Alaska than we can serve in DAS. DAS depends nearly 100% on soft money for sponsoring students as there is only one Teaching Assistant position. The total number of faculty and current funding situation restrict the number of students who can be admitted with funding into DAS. The shared lab and cubicle space and no formally assigned departmental space introduce a background level of uncertainty and tension. DAS is reaching its space limits with respect to the available student cubicles and lab space in IARC and GI. The interdisciplinary nature of climate impact studies allows students of other disciplines to graduate with climate relevant themes without taking classes in atmospheric sciences.

**Strengths:** There are more opportunities in the issues of climate and air quality research in Alaska than we can serve in DAS. The grantsmanship of DAS faculty has been successful in securing funding for instructional equipment through competitive proposals on campus and beyond. There are good learning and research conditions for our graduate students. The work space for faculty and students is all in the same building and we are down the hall from the National Weather Service forecast office. DAS faculty and students have access to unique facilities (e.g. GI’s Poker Flat Research Range, Arctic Facility for Atmospheric Remote Sensing, National Weather Service, Arctic Region Supercomputing Center, Lidar Research Laboratory), and data of various observational networks.

**Projection:** The DAS student body will remain more or less constant at current level. The DAS faculty is close to capacity with respect to the maximum number of students they can mentor. If funding rates decrease, a decrease in student numbers may be likely with the current number of academic faculty. Two students graduated this summer (1 MS; 1 PhD) with the possibility of an additional six by the end of AY12 (4 MS; 2 PhDs).