## Assessment Activities, 2008-2009
### Atmospheric Science Program

<table>
<thead>
<tr>
<th>University Assessment Goals</th>
<th>Program Outcomes</th>
<th>Assessment Procedures and Criteria</th>
<th>Assessment Results</th>
<th>Use of Assessment Results/Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Graduates will demonstrate disciplinary competence and/or professional proficiency.</td>
<td>Students will demonstrate master’s level competency in general areas of physical, synoptic, and dynamic meteorology and expertise in their research area. Thesis-track graduates will demonstrate the ability to perform research in a self-directed manner.</td>
<td>Each student must demonstrate general competency on both a written and oral comprehensive examination. Additionally, students are required to demonstrate expertise in their research area through defense of their master’s thesis.</td>
<td>2 students met/exceeded goals; 1 student marginally met goals</td>
<td>The department has developed an entrance exam in order to identify a student’s competency level upon entrance in the M.S. program. This will further strengthen the utility of current assessment procedures.</td>
</tr>
<tr>
<td>2. Graduates will demonstrate critical thinking skills.</td>
<td>Graduate students will demonstrate a mastery of critical thinking skills through identification and implementation of appropriate meteorological methods, data sets, and references.</td>
<td>Critical thinking skills are assessed using rubrics administered at the time of the student’s oral exams. Critical thinking skills – as evidenced by use of appropriate maps and graphs, integration of diverse data sets, and mathematical skills – are measured for both the oral exam and all prior coursework at that time.</td>
<td>2 students met/exceeded goals; 1 student marginally met goals</td>
<td>Departmental assessments of graduate students have led us to steer a greater proportion of the students into our “thesis” track, where outcomes are generally stronger. New courses have been developed that employ more modeling, more data sets, and more use of scientific literature.</td>
</tr>
<tr>
<td>3. Graduates will demonstrate Ignatian values, to include but not limited to a commitment to an exploration of faith and the promotion of justice.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Graduates will demonstrate the ability to communicate clearly and effectively.</td>
<td>Graduates will be able to communicate effectively within both the community of atmospheric scientists and with the public. This communication is both oral and written. At the graduate level, students can present appropriate seminars that describe state-of-the-art research in a manner consistent with expectations of a major professional conference.</td>
<td>All graduate students complete an oral examination that is evaluated by the faculty. Graduate students on the thesis track present a thesis defense. The thesis itself is evaluated by the faculty for writing competency.</td>
<td>All 3 graduate students met or exceeded goals.</td>
<td>The strong performance by graduate students in this area has motivated enhanced support for even greater opportunities for expanded communications skills, including support for conference presentations, posters, weather briefings, public outreach efforts, and so on.</td>
</tr>
<tr>
<td>5. Graduates will demonstrate deliberative reflection for personal and professional formation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Graduates will demonstrate the ability to work effectively across race, ethnicity, culture, gender, religion, and sexual orientation.