

UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in 2013-14

UNDERGRADUATE PROGRAMS

DEPARTMENT Atmospheric Sciences **DATE** April 28, 2015

PROGRAM(S) COVERED IN REVIEW B.S. in Atmospheric Sciences

COMMITTEE MEMBER(S) CONDUCTING REVIEW Devon Hansen and Bradley Myers

1. STUDENT LEARNING GOALS

- | | | | |
|---------------------------------------|--------------|----------------|---------------------------|
| • Were any goals referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were goals well articulated? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Do goals address student learning? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The undergraduate assessment plan lists eight goals for student learning.

In addition to the program goals, please also consider UND's institutional and Essential Studies goals for student learning (shown in alignment within parentheses) and identify which goals are similar to program goals.

- X 1 Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”)
 X 2 Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate)
 X 3 Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage)
 X 4 Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”)
 X 5 Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”)
 6 Diversity (“demonstrate understanding of diversity and use that understanding...”)
 7 Lifelong learning (“commit themselves to lifelong learning”)
 8 Service/citizenship (“share responsibility both for their communities and for the world”)

Comments regarding program goals and alignment with institutional and Essential Studies goals:

Essential Studies goals of communication, thinking and reasoning (critical thinking, creative thinking, and quantitative reasoning), and information literacy are aligned with the intended student learning outcomes of the department.

2. ASSESSMENT METHODS

- | | | | |
|--|--------------|----------------|---------------------------|
| Were any specific assessment methods referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were specifically chosen assessment methods appropriately aligned with individual goals? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Were both direct and indirect assessment methods used as components of a “multiple measures” approach? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The department utilizes a variety of both direct and indirect assessment methods, which are aligned with intended student learning outcomes.

3. ASSESSMENT RESULTS

- | | | | |
|--|--------------|----------------|---------------------------|
| Were any assessment results reported? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were the results clear in terms of how they specifically affirm achievement of goals? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were the results clear in terms of how they indicate need for improvement? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

- Were the results tied to goals for student learning?

YES X NO QUALIFIED Y/N

Comments:

The assessment methods are well implemented to assess the department's student learning goals. For example, the capstone course (AtSc 492: Senior Project) specifically addresses five goals for student learning, and the graduating senior exit survey addresses all eight student learning goals.

In addition to program goals, some assessment results may be applicable to institutional and Essential Studies goals. Indicate any goals for which the program presents findings, and, for indicated items, describe findings below.

- X 1 Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”)
 X 2 Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate)
 X 3 Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage)
 X 4 Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”)
 X 5 Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”)
 6 Diversity (“demonstrate understanding of diversity and use that understanding...”)
 7 Lifelong learning (“commit themselves to lifelong learning”)
 8 Service/citizenship (“share responsibility both for their communities and for the world”)

Comments regarding results and the application of results to program, institutional, and Essential Studies goals:

Assessment data collected by the department indicate that learning is occurring for each of the ES goals.

4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported?

YES X NO QUALIFIED Y/N

- If so, do curricular or other improvements/changes arising from assessment results directly address goals for student learning?

YES X NO QUALIFIED Y/N

Comments:

The department continues to work toward improvement of student learning outcomes by identifying areas of concern through their collection of annual assessment data and thoughtfully implementing changes to their curriculum.

SUMMARY

Strengths

Areas for Improvement

- X A specific plan for assessment is in place.
 X Student learning goals are well-articulated.
 X Assessment methods are clearly described.
 X Assessment methods are appropriately selected.
 X Assessment methods are well-implemented.
 X Direct and indirect methods are implemented.
 X Results are reported.
 X Results are tied to closing the loop.
 (Decision-making is tied to evidence.)

- No specific plan for assessment is in place.
 Student learning goals are not well-articulated.
 Assessment methods are not clearly described.
 Assessment methods are not appropriately selected.
 Assessment methods are not well-implemented.
 A single type of assessment methods predominates.
 No results are reported.
 Results are not clearly tied to closing the loop.
 (Decision-making is not directly tied to evidence.)

OVERALL SUMMARY AND RECOMMENDATIONS:

As was noted in 2010-11 assessment report of the Atmospheric Sciences undergraduate program and continues to be the case in this assessment report that this department “provides a textbook-perfect example of a situation where assessment is thoughtfully designed and systematically executed.”

MATERIALS REVIEWED

- X Annual assessment report
 Annual Report
 X Assessment plan (as posted)

X Previous assessment review
 Other (please describe)

Reviewer(s):	Name	Devon Hansen	Bradley Myers	_____
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Section 1: Y Section 2: Y Section 3: Y Section 4: Y

Coding Key:

- Y = yes, this is done appropriately and well (bearing in mind the kind of program(s) reviewed and recognizing that assessment is a cyclical process, i.e., with additional kinds of data to be collected and analyzed in other years)
- Q = qualified yes as action or progress is apparent; however, evidence is lacking that this is completely and appropriately done
- N = no, it is unclear whether it was done at all, or it is not done in relationship to student learning

Revised Sept 24, 2014

UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in 2013-14

GRADUATE PROGRAMS

DEPARTMENT Atmospheric Sciences **DATE** April 28, 2015

PROGRAM(S) COVERED IN REVIEW M.S. and Ph.D. in Atmospheric Sciences

COMMITTEE MEMBER(S) CONDUCTING REVIEW Devon Hansen and Bradley Myers

1. STUDENT LEARNING GOALS

- | | | | |
|---------------------------------------|--------------|----------------|---------------------------|
| • Were any goals referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were goals well-articulated? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Do goals address student learning? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The department assessment plan cites three goals for student learning with several objectives listed for each goal. The current assessment plan makes no distinction between the M.S. and Ph.D. programs for assessment of student learning.

2. ASSESSMENT METHODS

- | | | | |
|--|--------------|----------------|---------------------------|
| Were any specific assessment methods referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were specifically chosen assessment methods appropriately aligned with individual goals? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Were both direct and indirect assessment methods used as components of a “multiple measures” approach? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The department utilizes both direct and indirect assessment methods, which are aligned with specific student learning objectives.

3. ASSESSMENT RESULTS

- | | | | |
|--|-----------------|----------------|---------------------------|
| Were any assessment results reported? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were the results clear in terms of how they specifically affirm achievement of goals? | YES <u> </u> | NO <u> </u> | QUALIFIED Y/N <u>X</u> |
| • If so, were the results clear in terms of how they indicate need for improvement? | YES <u> </u> | NO <u> </u> | QUALIFIED Y/N <u>X</u> |
| • Were the results tied to goals for student learning? | YES <u> </u> | NO <u> </u> | QUALIFIED Y/N <u>X</u> |

Comments:

The assessment methods are implemented to assess the department’s student learning goals. For example, comprehensive exams were given to four students (two doctoral students and two non-thesis MS students) with all passing with an “unconditional pass.” Generally, there seems to be no clear evidence provided to affirm achievement of goals, to indicate need for improvement, or whether the results are tied to goals for student learning.

4. CLOSING THE LOOP

- | | | | |
|---|--------------|----------------|---------------------------|
| Were any actions taken on the basis of assessment results reported? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, do curricular or other improvements/ | | | |

changes arising from assessment results
 directly address goals for student learning? YES X NO QUALIFIED Y/N

Comments:

Departmental curricular changes continue to be made to improve student learning. An updated assessment plan (Fall 2015) will include changes in program assessment.

SUMMARY

Strengths

Areas for Improvement

X A specific plan for assessment is in place.
X Student learning goals are well-articulated.
X Assessment methods are clearly described.
X Assessment methods are appropriately selected.
 Assessment methods are well-implemented.
X Direct and indirect methods are implemented.
 Results are reported.
 Results are tied to closing the loop.
 (Decision-making is tied to evidence.)

 No specific plan for assessment is in place.
 Student learning goals are not well-articulated.
 Assessment methods are not clearly described.
 Assessment methods are not appropriately selected.
 Assessment methods are not well-implemented.
 A single type of assessment methods predominates.
 No results are reported.
 Results are not clearly tied to closing the loop.
 (Decision-making is not directly tied to evidence.)

OVERALL SUMMARY AND RECOMMENDATIONS:

We realize that the department's graduate assessment plan for student learning will be updated with a plan scheduled for adoption in Fall 2015 to include changes to improve methods of student learning assessment. At that time, it is expected that there will be separate assessment plans for the M.S. and Ph.D. programs.

MATERIALS REVIEWED

X Annual assessment report
 Annual report
X Assessment plan (as posted)
X Previous assessment review
 Other (please describe)

Reviewer(s):	Name	Devon Hansen	Bradley Myers	<u> </u>
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Y = yes, this is done appropriately and well (bearing in mind the kind of program(s) reviewed and recognizing that assessment is a cyclical process, i.e., with additional kinds of data to be collected in other years)
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