FINAL

UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in __2011____ Annual Reports
GRADUATE PROGRAMS

DEPARTMENT___Computer Science_____DATE__February 7, 2012_____

COMMITTEE MEMBER(S) CONDUCTING REVIEW__Barbara Combs and Odella Fuqua_____

1. STUDENT LEARNING GOALS

- Were any goals referenced? YES_X__ NO___ QUALIFIED Y/N ___
- If so, were goals well articulated? YES_X_ NO___ QUALIFIED Y/N ___
- Do goals address student learning? YES_X_ NO__ QUALIFIED Y/N ___

Comments:
The department's 2006 assessment plan lists three goals and five different assessments: Comprehensive Examination Assessment, Defense Assessment, Thesis Assessment, Software Engineering Document Assessment and Software Engineering Software Assessment. Student learning goals and objectives are clearly listed and are written as "will acquire" and "will demonstrate" upon completion. Those same goals and objectives are aligned with the annual report document. In the annual report, the department indicated that the assessment plan program description and goals were modified in the spring of 2008 to reflect the new PHD in Scientific Computing; however, this revised plan has not been posted on the website. Goals for this program were noted in the annual report but no objectives aligned with students learning goals were provided.

2. ASSESSMENT METHODS

Were any specific assessment methods referenced? YES_X___ NO____ QUALIFIED Y/N ____

- If so, were specifically chosen assessment methods appropriately aligned with individual goals? YES_X__ NO____ QUALIFIED Y/N ___
- Were both direct and indirect assessment methods used as components of a "multiple measures" approach? YES_____ NO____ QUALIFIED Y/N _X__

Comments:
It appears that only direct assessment is used to assess learning goals. The department notes in their assessment plan that a "number of assessment methods that were in place for the graduate program have been suspended, because of changes in the program description, goals, introduction of new programs, and examination." They report that new assessment methodologies will be implemented by their graduate committee for the revised and new graduate programs.

The primary assessment method appears to be a series of checklists that assess specific qualitative questions and criteria. The checklists are scored by the department's committee members using a 1-5 rating scale with 1 being Unacceptably and 5 being Excellently. No descriptive information is provided that indicates what each scale means (For example, what does it mean to have demonstrated "mastery of the topical foundation material" satisfactorily vs. excellently?)

3. ASSESSMENT RESULTS

Were any assessment results reported? YES_X_ NO____ QUALIFIED Y/N ____

- If so, were the results clear in terms of how they specifically affirm achievement of goals? YES_X___ NO____ QUALIFIED Y/N __
- If so, were the results clear in terms of how they indicate need for improvement? YES_X_ NO____ QUALIFIED Y/N __
- Were the results tied to goals for student learning? YES_X___ NO____ QUALIFIED Y/N ___

Comments:

Assessment results were reported for three assessment areas – Master's defenses, Master's thesis, and pass rates on two examinations (Graduate Core Exam-phased out by 2011 and Graduate Comprehensive exam phased in by 2011). All areas reported satisfactory or passing results. The checklist as outlined in the assessment plan was not used for examination analysis. No results were reported for the Software Engineering Document Assessment or the Software Engineering Software Assessment, but this may be because the department elected not to assess Goal 3. No goals were linked to assessments in the annual report, so it was not clear which goals were being assessed but when cross referencing the annual report with the assessment plan it appears that Goals 1 and 2 were targeted.

4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported? YES_____ NO_X__ QUALIFIED Y/N _ __

- If so, do curricular or other improvements/ changes arising from assessment results directly address goals for student learning? YES_____ NO_ ___ QUALIFIED Y/N _ _

Comments:

There was no mention of student learning improvements.

As noted in the comments on section 2, the department commented about possible revisions and new assessment methodologies, but it is unclear which goals are being revised.

Assessment results reported in the annual report were satisfactory, so it is possible that the department did not see the need for closing the loop activities.

SUMMARY

Strengths	***Areas for Improvement***
_ _ _ A specific plan for assessment is in place.	____ No specific plan for assessment is in place.
____Student learning goals are well-articulated.	_ _ _ Student learning goals are not well-articulated.
_ _ _Assessment methods are clearly described.	____ Assessment methods are not clearly described.
____Assessment methods are appropriately selected.	____ Assessment methods are not appropriately selected.
_ _ _Assessment methods are well-implemented.	____ Assessment methods are not well-implemented.
_ _ _Direct and indirect methods are implemented.	____ A single type of assessment methods predominates.
_ _ _Results are reported.	____ No results are reported.
_ _ _Results are tied to closing the loop. (Decision-making is tied to evidence.)	__ __ Results are not clearly tied to closing the loop. (Decision-making is not directly tied to evidence.)

OVERALL SUMMARY AND RECOMMENDATIONS:

We recognize that the departments' assessment plan for its graduate programs is in transition and would encourage the department to post the revised plan on the assessment webpage as soon as possible. The department may also wish to consider reporting the results in the annual report in a manner that more clearly shows which goals and objectives are being assessed. Finally, we would encourage the department to consider including descriptive information for each level of the rating scale to increase the reliability of the assessment checklists.

MATERIALS REVIEWED

__**Y**___ Annual report	__**Y**___ Assessment plan (as posted)
_____ Appendices (cited in annual report)	__**Y**___ Previous assessment review
__**Y**___ Other (please describe) FY2010 Annual Report	

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Reviewer(s):			
	Name	Odella Fuqua	Barbara Combs
	Department	CIO	College of Human Development
	Phone Number	701-777-4265	701-777-2862
	e-mail	odella.fuqua@und.edu	Barbara.combs@email.und.edu

Section 1: **Y** Section 2: **Y** Section 3: **Y** Section 4: **NA**

Coding Key:

- Y = yes, this is done appropriately and well
- N = no, this is not done at all, or it is not done in relationship to student learning
- NA = no information available
- ? = action or progress is apparent; however, evidence is lacking that this is completely and appropriately done

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UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in _2011_ Annual Reports
UNDERGRADUATE PROGRAMS

DEPARTMENT___Computer Science_____DATE___February 7, 2012____

COMMITTEE MEMBER(S) CONDUCTING REVIEW__Barbara Combs and Odella Fuqua_____

1. STUDENT LEARNING GOALS

- Were any goals referenced? YES_X__ NO____ QUALIFIED Y/N ___
- If so, were goals well articulated? YES_X__ NO____ QUALIFIED Y/N ___
- Do goals address student learning? YES_X_ NO____ QUALIFIED Y/N ____

Comments:

The 2010 Undergraduate Assessment Plan clearly articulates programs goals, student objectives and student outcomes. Their student outcomes listed below most nearly match the student learning goals we would expect to see. Outcome 8 is the least clear. We are not sure what is meant by "a broad general education background unless the department is referring to the essential studies goals and expectations for undergraduates."

Student Outcomes:

1) *Knowledge of programming language principles*
2) *Knowledge of the software development process*
3) *Knowledge of computing systems*
4) *Knowledge of ethical principles and social implication of computing*
5) *The ability to communicate effectively, orally and in writing*
6) *Proficiency in programming and software development*
7) *The ability to conduct sound scientific investigation and analysis*
8) *A broad general education background*

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In addition to the Departmental 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 departmental goals.

X (SO5) 1 Communication – written or oral ("able to write and speak in various settings with a sense of purpose/audience")
X (SO1, SO2, SO7) 2 Thinking and reasoning – critical thinking (or "be intellectually curious"; analyze, synthesize, evaluate)
_____ 3 Thinking and reasoning – creative thinking (or "be intellectually creative"; explore, discover, engage)
?(SO3) 4 Thinking and reasoning – quantitative reasoning ("apply empirical data…analyze graphical information")
X (SO4) 5 Information literacy ("be able to access and evaluate…for effective, efficient, and ethical use")
?(SO8) 6 Diversity ("demonstrate understanding of diversity and use that understanding…")
_X____ 7 Lifelong learning ("commit themselves to lifelong learning")
_**X**____ 8 Service/citizenship ("share responsibility both for their communities and for the world")

Comments regarding departmental goals and alignment of departmental goals with institutional and Essential Studies goals:

It appears the student outcomes are written to satisfy ABET accreditation criteria; still the goals identified above seem to related to UND's Institutional and Essential Studies goals.

2. ASSESSMENT METHODS

Were any specific assessment methods referenced? YES_X__ NO____ QUALIFIED Y/N ____

- If so, were specifically chosen assessment methods appropriately aligned with individual goals? YES_X___ NO____ QUALIFIED Y/N ____
- Were both direct and indirect assessment methods used as components of a "multiple YES X__ NO____ QUALIFIED Y/N ___

measures" approach?

Comments:
The student outcomes are assessed based on the following table provided by the department.

Program Outcomes	Student Work to be Assessed	Additional Instruments
1) Programming language principles	Selected exam questions from CSci 161, 365, and 370	Exit survey
2) Software development principles	Selected exam questions from CSci 161 and 363	Alumni survey, employer survey, exit survey
3) Computing systems knowledge	Selected exam questions from CSci 370 and 451	
4) Knowledge of ethical principles and issues	Selected exam questions from CSci 289	Employer survey, exit survey
5) Effective communication	Oral presentations and writing assignments in CSci 289 and CSci 363	Employer survey, exit survey
6) Programming proficiency	Programming assignments in CSci 161, 230, 363, and 451	Alumni survey, employer survey, exit survey
7) Sound analysis	Selected homework and exam questions in CSci 242 and CSci 435	Alumni survey, employer survey, exit survey
8) General education	Conducted at University level in general education revalidation process	

It is not clear how outcome 8 is a measurable student outcome since no specific courses or assessment procedures are noted.

3. ASSESSMENT RESULTS

Were any assessment results reported? YES_X___ NO____ QUALIFIED Y/N ____

- If so, were the results clear in terms of how they specifically affirm achievement of goals? YES_X___ NO____ QUALIFIED Y/N ____
- If so, were the results clear in terms of how they indicate need for improvement? YES_X___ NO____ QUALIFIED Y/N ____
- Were the results tied to goals for student learning? YES_X__ NO____ QUALIFIED Y/N ____

Comments:
Extensive results from direct (course tasks and summaries of course grades and indirect assessments (teaching evaluations, exit survey and the alumni survey) are reported. An analysis of the results and conclusions drawn were reported as well. The results are reported for student outcomes 1, 4, 5, 6, and 7 as per their assessment plan. Results from the other student outcomes were not clearly stated, yet referenced in the table. It should be noted that course grades cannot be directly linked back to student learning goals so using course grades is not typically considered a direct assessment method.

In addition to departmental goals, some assessment results may be applicable to institutional and Essential Studies goals. Indicate any goals for which the department 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)
_____ 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 departmental, institutional and Essential Studies goals:

The outcomes assessed and analyzed seem most aligned with the goals identified above.

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:

Overall the department feels that targeted program outcomes are being achieved in identified courses, but not all faculty followed the guidelines for program assessment. In response, the committee has designed a Program Assessment Form. The department also reports specific changes that faculty made within courses based upon assessment results (Dr. Kim's increase emphasis on implementation of algorithims).

SUMMARY

Strengths	***Areas for Improvement***
_**X**__ A specific plan for assessment is in place.	____ No specific plan for assessment is in place.
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_**X**_Assessment methods are clearly described.	____ Assessment methods are not clearly described.
____Assessment methods are appropriately selected.	____ Assessment methods are not appropriately selected.
__ _Assessment methods are well-implemented.	____ Assessment methods are not well-implemented.
_X__Direct and indirect methods are implemented.	____ A single type of assessment methods predominates.
_X _Results are reported.	____ No results are reported.
_X_Results are tied to closing the loop. (Decision-making is tied to evidence.)	____ Results are not clearly tied to closing the loop. (Decision-making is not directly tied to evidence.)

OVERALL SUMMARY AND RECOMMENDATIONS:

The Computer Science department is to be commended for its undergraduate assessment plan and the implementation of that plan. Also, the annual report aligns nicely with their assessment plan making it easy to follow.

In the future, the department may want to report a summary of their results in a table format similar to their assessment methods chart for student outcomes. Such a chart would indicate a clear alignment with outcome, assessment methods, and results.

MATERIALS REVIEWED

__**Y**__ Annual report	__**Y**___ Assessment plan (as posted)
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