

# Program Review 2011 Evaluation Form

## Program Information

Program Name \*i.e. Anthropology      Mathematics  
College /School Name \*i.e. CLA      CNSM, Mathematics and Statistics (DMS)  
Degree \*Please choose one from the list. (Cert., AAS, BA, BS, MA, MS etc.) PhD.

## PART I - To be completed by the Faculty Program Review Committee

### 1. Quality and Assessment of the Program

Quality of the program, as determined by the establishment and regular assessment of program outcomes. Outcomes should be comprehensive, and indications of achievement should involve multiple measures and satisfy the properties of good evidence.

Please check all that applies to the Quality and Assessment of the Program.

- Separate plan for each program level e.g. Cert., AA/AAS, BS, BA, BBA, MS, MA, PhD
- Multiple (at least two) measures of student outcomes
- Plan has direct evidence of student learning not just surveys
- Assessment information is collected and summarized regularly
- Assessment summary is based on aggregate student information
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The program's assessment process appears planned and has an implementation schedule. Curricular changes do not appear to be addressed though the narrative suggests changes may be made. Overall, the program, through their assessment, is stated to be functioning well.

Assessment Summary not in standard tabular format; included in report as a narrative. It appears that alumni survey is often not returned so information from these may be problematic in that the sample is too small or non-existent for genuine assessment and improvement of program.

Committee recommends survey method improves or another method of assessment explored.

## **2. Demand for Program Services**

Demand for program services, as indicated by measures such as: credit hour production appropriate to the program's mission, services performed by the program in support of other programs, graduates produced, the prospective market for graduates, expressed need by clientele in the service area, documented needs of the state and/or nation for specific knowledge, data, or analysis, other documented needed.

Committee's assessment and guidance on Demand for Program Services:  
Report:

Enrollee's major:	FY06	FY07	FY08	FY09	FY10
In department	743	648	583	633	587
In unit, outside department	1348	1353	1322	1416	1324
Outside unit	5950	5398	5279	4755	4992

### 3. Program Productivity and Efficiency

Program productivity and efficiency as indicated by courses, student credit hours, sponsored proposals and service achievements produced in comparison to the number of faculty and staff and the costs of program support (The latter may not be available or may be a combined cost for several programs).

Teaching:

#### Departmental FTEs by job class

Job class	FY06	FY07	FY08	FY09	FY10
Adjunct FTEs	1.53	1.4	1.35	1.58	2.48
Faculty FTEs	9.91	11.36	11.31	10.7	11.33
Staff FTEs	2.02	.93	.93	1.	1.

In the Math and Stat Program Review there were 19 publications listed for 2007-2008.

From the Math and Stat report: research accomplishments of DMS faculty -over three-quarters of the faculty (11 of 14) obtained substantial external funding at some point over the last five academic years.

Did the program review include significant public, university and professional service achievements?

- Yes
- No

Committee's assessment and guidance on Program Productivity and Efficiency:

Service: Consulting seminars for graduate students in Statistics, Biology, Fisheries and Wildlife Biology and Alaska teachers in a research-based Alaska-specific mathematics curriculum called Math in a Cultural Context Curriculum.

DMS program has steady SCH and strong Service Teaching accomplishments and faculty appear to productive at teaching, research and service.

#### 4. Program Duplication

Unnecessary program duplication resulting from the existence of a similar program or programs elsewhere in the UA statewide system (BOR policy). Academic programs offered by UAA are available online at <http://www.uaa.alaska.edu/academics/degrees/> and those offered by UAS are available at <http://www.uas.alaska.edu/academcis/alpha.html>

Committee's assessment and guidance on Program Duplication:

UAF offers the only Ph.D. in Mathematics in the UA system.

#### 5. Centrality of the Program

Centrality of the program to the mission, needs and purposes of the university and the unit.

Committee's assessment and guidance on Centrality of the Program:

As a land-, sea- and space grant institution, Mathematics and Statistics are a necessary and integral program at the undergraduate and graduate level.

Mathematics and Statistics supports the Strategic Plans and the 2017 Vision Statement.

#### 6. Timeliness

Timeliness of an action to augment, reduce or discontinue the program. [Address current internal or external factors that provide an opportunity for change, i.e. availability of new grant funding, increasing employment opportunities of graduates, or the departure of a significant portion of the faculty.]

Committee's assessment and guidance on Timeliness:

In the Dept. of Mathematics and Statistics (DMS) report a 2006 external program review stated two high priority items:

- 1) increased space and
- 2) increased faculty.

For example: in Fall 2009 and Spring 2010, nearly 60 % of their classes were taught by adjuncts.

From report: "DMS would benefit greatly from having a larger number of graduate students, but need additional TA-ships for that to be possible."

## **7. Cost of the Program**

Cost of the program relative to the cost of comparable programs or to revenue produced (BOR



- Continue program but improve assessment process and reporting
- Continue program but improve other specific areas

Comments:

UAF offers the only mathematics Ph.D. degree in the state of Alaska.

The mathematics MS/MAT/Ph.D. have a mostly satisfactory assessment plan that has been partly implemented. If either the MAT and Ph.D. degrees are retained, each should have an assessment plan and outcomes report separate from that of the MS degree. (There can be overlap, but the learning outcomes of different degrees must differ to some extent...else why offer more than one degree?) The assessment plan includes review of the curriculum relative to that of peer institutions. While this is appropriate as a control on program quality, it is not a measure of student learning outcomes. The results of the comprehensive examination are a good assessment tool. While the alumni survey is an acceptable component of an assessment plan, surveys often have low return rates and often turn out to yield little information on learning outcomes. An additional means of direct assessment that many graduate programs use is an evaluation of the thesis defense, done by the advisory committee.

NWCCU assessment standards require regular collection of assessment data specified in the assessment plan, regular review of that data by the faculty, and implementation of indicated curricular or instructional changes. All of these facets of assessment must be evident in subsequent assessment reports.