

O'Quin, Karen

From: O'Quin, Karen
Sent: Tuesday, September 22, 2015 10:46 AM
To: Pacheco, Maria; Shanahan, Linda L; Ansuini, Catherine G.; Hays, Sean G; Wieczkowski, Julie A; Vermette, Stephen; Vermette, Veryan; Warren, Robert J; Riessen, Howard; Standora, Ed; Holmgren, Camille A.; Meyer, Brian R; Snyder, Randal; Sokol, Anne Marie Wall, Amitra A.
Cc:
Subject: Natural Science assessment--your section(s) have been sampled
Attachments: Assessment of SLOs using Multiple Choice Exams.docx; Assessment of SLOs using Short Answer & Essay Exams.docx; Natural Science SAMPLED fall 2015.xlsx

Dear NSS Faculty member,

One or more of your sections have been randomly chosen to participate in the required assessment of IF14 Natural Science. I've attached a small spreadsheet with the CRNs of the sampled sections.

Amitra and I wanted to try to make the process as painless as possible for you. I've attached two documents that (I hope) will explain the process fully, whether you're using multiple choice exams or short answer/essay exams.

The assessment of the two SLOs should be conducted later in the semester, after you have had an opportunity to cover the relevant content. They do NOT need to be assessed on the same exam, although they could be (on the final, for example).

Either Amitra or I would be happy to answer any questions you may have.

Thank you in advance,

Karen

Karen O'Quin, Ph.D.
Associate Dean
School of Natural and Social Sciences
SUNY Buffalo State

Assessment of SLOs using Multiple Choice Exams

We need to have separate measures of each student learning outcome (SLO). Ideally, you will give us two frequency distributions of your students' scores, one for each SLO.

SLO #1

Describe the methods natural scientists use to explore natural phenomena, including observation, the framing of scientific questions, the development of hypotheses, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis.

SLO #2

Apply natural science data, concepts, and models to natural science (critical thinking).

You'll be using exams that you're already giving. Procedurally, you decide which items you're already using on an exam are the best measures of SLO #1--a **minimum of 5 items**. Please have the exam re-scored using **ONLY** those items. Then the easiest thing to do is just to give us the entire scanning printout (minus the page with names) from the re-scoring, plus a hard copy of the items you chose, and we'll take it from there. The procedure may be different if your students are taking the exams in Blackboard, but the concept is the same. We need the frequency distribution of percentage correct for the items you have chosen to measure SLO #1, along with a separate file of the items themselves.

Similarly, for SLO #2, decide which exam items are the best measure of SLO #2, again a minimum of 5 items. Have the exam re-scored using only those items, and give us the scanning printout along with a hard copy of the items you chose.

That's it. We would be happy to meet individually if you like. And of course if you have any questions please contact one of us:

Karen O'Quin oguink@buffalostate.edu 878-6434

Amitra Wall hodgeaa@buffalostate.edu 878-3035

Assessment of SLOs using Short Answer and Essay Exams

We need to have separate measures of each student learning outcome (SLO). We need a) summaries, probably frequency distributions, of the scored work from your students for each SLO, and b) a copy of the scored work for a random 20% subsample of students, one for each SLO.

SLO #1

Describe the methods natural scientists use to explore natural phenomena, including observation, the framing of scientific questions, the development of hypotheses, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis.

SLO #2

Apply natural science data, concepts, and models to natural science (critical thinking).

You'll be using exams that you're already giving. Procedurally, you decide which item(s) that you're already using on an exam are the best measure(s) of SLO #1. You could choose only 1 item if it's lengthy and truly representative, or up to 5 shorter items. Please grade these items as you normally would, then provide us with a frequency distribution of the percentage correct for your students on these items. In addition, please choose a random 20% sample of the graded items and copy them for us so we have the possibility of doing reliability re-scoring. In summary, we need the frequency distribution of percentage correct for the items you have chosen to measure SLO #1, along with a copy of a random selection of 20% of the graded items themselves.

Similarly, for SLO #2, decide which exam item(s) are the best measure of SLO #2, following the procedure in the paragraph above.

We would be happy to meet individually if you like. And of course if you have any questions please contact one of us:

Karen O'Quin oguink@buffalostate.edu 878-6434

Amitra Wall hodgeaa@buffalostate.edu 878-3035

O'Quin, Karen

From: O'Quin, Karen
Sent: Tuesday, September 22, 2015 10:51 AM
To: Bergslien, Elisa; Goodman, Scott; Johnson, Scott; Anselmi, Lisa M.; Frothingham, Kelly; Skerrett, Ingrid M.
Subject: FW: Natural Science assessment--your section(s) have been sampled
Attachments: Assessment of SLOs using Multiple Choice Exams.docx; Assessment of SLOs using Short Answer & Essay Exams.docx; Natural Science SAMPLED fall 2015.xlsx

Dear Natural Science chair,

I wanted to provide you with this information so you could reinforce its importance, especially for adjunct faculty. It's not optional.

Natural Science assessment was supposed to be conducted last spring, but the faculty member chairing the committee failed to follow through. Thus the task has fallen to Amitra and me. Sigh.

Karen

From: O'Quin, Karen
Sent: Tuesday, September 22, 2015 10:46 AM
To: Pacheco, Maria; Shanahan, Linda L; Ansuini, Catherine G.; Hays, Sean G; Wieczkowski, Julie A; Vermette, Stephen; Vermette, Vryan; Warren, Robert J; Riessen, Howard; Standora, Ed; Holmgren, Camille A.; Meyer, Brian R; Snyder, Randal; Sokol, Anne Marie
Cc: Wall, Amitra A.
Subject: Natural Science assessment--your section(s) have been sampled

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Thank you in advance,

Karen

Karen O'Quin, Ph.D.
Associate Dean
School of Natural and Social Sciences
SUNY Buffalo State

O'Quin, Karen

From: O'Quin, Karen
Sent: Wednesday, December 09, 2015 9:35 AM
To: Pacheco, Maria; Shanahan, Linda L; Ansuini, Catherine G.; Hays, Sean G; Wieczkowski, Julie A; Vermette, Stephen; Vermette, Veryan; Warren, Robert J; Standora, Ed; Holmgren, Camille A.; Meyer, Brian R; Snyder, Randal; Sokol, Anne Marie
Cc: Wall, Amitra A.
Subject: RE: Natural Science assessment--your section(s) have been sampled
Attachments: Assessment of SLOs using Multiple Choice Exams.docx; Assessment of SLOs using Short Answer & Essay Exams.docx; Natural Science SAMPLED fall 2015.xlsx; Standards tables.docx

Hello again,

The end of the semester is near. I just wanted to remind you about the natural science assessment process, and provide an opportunity to answer any questions you may have.

I have also attached a document called "Standards tables" that will give you an idea of the kind of summary that will result from the assessment data.

Please let me know if you have questions.

Karen

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Either Amitra or I would be happy to answer any questions you may have.

Thank you in advance,

Karen

Table 1

Natural Science Assessment Fall 2015

Instructor & Class	n SLO 1	n SLO 2	SLO #1				SLO #2			
			Exceeds	Meets	Approaches	Does not meet	Exceeds	Meets	Approaches	Does not meet
Wieczkowski ANT 100	26	26	14	6	1	5	3	3	2	18
Riessen BIO 104	43	43	5	8	0	30	3	7	0	33
Warren BIO 104	32	32	10	15	5	2	22	6	2	2
Sokol CHE 100	35	35	2	8	7	18	8	6	3	18
Holmgren GEG 101	45	43	5	20	12	8	14	16	5	8
Vermette GEG 101	22	39	13	8	0	1	18	10	8	3
Meyer SCI 100	28	28	12	10	4	2	11	11	5	1
Total n	231	246	61	75	29	66	79	59	25	83
Percentage			26.4%	32.5%	12.6%	28.6%	32.1%	24.0%	10.2%	33.7%

STANDARDS USED

- Exceeds: 90% and higher
- Meets: 70-89%
- Approaches: 60-69%
- Does not meet: 59% or less
(or instructor determination)