Meta-assessment Analysis Report for the

College of Science and Engineering Technology

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Assessment is an important best-practice in higher education that helps programs determine whether key objectives are being met, identify areas for improvement, and develop actions to improve program effectiveness. Additionally, meaningful and effective assessment is the corner stone of many discipline-specific accreditations, as well as our University's regional accrediting body, the Southern Association of Colleges and Schools Commission on Colleges. Meta-assessment is an important tool for helping ensure that all programs at Sam Houston State University are engaging in a meaningful and effective continuous improvement assessment process.

Meta-assessment serves two important roles for the College and the University. First, it provides valuable feedback to units regarding ways in which they may continue to improve their annual assessment processes. Second, it provides College and University leaders with a way to observe the overall quality of assessment processes for their units. The purpose of this report is to detail the Meta-assessment process utilized by the College of Sciences, the College's plan for distributing the completed Meta-assessment rubrics to their departments and programs, the assessment strengths observed within the reviewed assessment plans, the areas for improvement of assessment practices, the strategies for implementing those improvements, and the training or resources needed to implement those strategies.

Section 1: Description of Meta-assessment Methodology Employed by the College

Detail the College's Meta-assessment methodology and process. Include a description of who was involved (e.g., a committee of senior faculty or college administrators), your methodology for evaluating unit-level assessment plans, steps for ensuring reliability, and your timeline.

For the 2016-2017 Meta-Assessment (MA) procedure in the College of Science and Engineering Technology (COSET)[1] a committee was formed consisting of one to two representatives from each department within the college, as well as the COSET Associate Dean of Assessment, and consisted of 10 faculty members. A total of 48 plans were evaluated. This number includes 38 degree plans (two of which are new), 8 departmental plans, and 2 plans for academic centers housed within two of the departments. With only a few exceptions, each of the plans was evaluated by two members of the MA Committee who were external to the department. (*Each plan was actually evaluated by two members; however, one member of the committee awarded a perfect score to every item on every plan, and so this individual's scores were not included in

[1] *In 2017, the College of Sciences was renamed the College of Science and Engineering Technology. The number of departments remained the same and consists of the Department of Agricultural Sciences and Engineering Technology, the Department of Biology, the Department of Chemistry, the Department of Computer Sciences, the Department of Geography and Geology, the Department of Mathematics and Statistics, and the Department of Physics. However, effective September 1, 2017, the Department of Agricultural Sciences and Engineering Technology separated into two Departments – the Department of Agricultural Sciences and the Department of Engineering Technology.*

any of the calculations. They are shown in orange blocks on the score matrix.) The committee members were assigned plans to review based on the goal of matching faculty expertise as closely as possible to that of the department they were asked to evaluate. The committee members had approximately two weeks to complete the reviews and submit them to the COSET Associate Dean. The feedback provided to the Chairs, based on the reviewers' comments and scores, was anonymous.

The purpose for having two outside members of a department evaluate the plans is to ensure that more faculty members within the college will understand both the process and benefits of assessment, thereby providing a knowledge base from which assessment plans can be improved. More specifically, the goals are to:

a) help faculty members become more aware of the benefits of assessment;

b) familiarize faculty members with institutional and accreditation assessment requirements;

c) familiarize faculty members with alternative methods of assessment by reviewing the approaches used by other departments;

d) provide a mechanism by which knowledge of assessment practices could be shared *within a department* - and subsequently used to improve assessment processes

e) share the workload associated with meta-assessment *and* with developing assessment plans, thereby reducing the time any one individual or department Chair spends on meta-assessment

f) have more than one person do the meta-assessment for a department in order to provide a more balanced assessment and additional perspectives; and,

g) ensure that the results of the meta-assessment will be shared with members of the department and the Chair.

As with the previous cycles of assessment, the current MA process entailed the use of the rubric developed by the Office of Planning and Assessment (OPA). However, the OPA modified the rubric slightly this year by expanding the scale from a 3-point scale to a 4-point scale. In addition, more criteria were added to the rubric to further assist evaluators in the use of the rubric. Because all members of the COSET MA committee participated in the previous cycle, no norming session was held this year.

The Associate Dean then tabulated the data (see Appendix A) and also prepared a summary data sheet for each department showing the scores received on each aspect of the rubric. The scores were obtained by converting the standards on the rubric to a 4-point score; specifically; "Developing = 1; "Minimally Compliant" = 2, "Good" = 3, and "Exemplary" = 4. With the understanding that the conversion of a qualitative score to a quasi-numerical scale is not ideal, it is nonetheless the case that the use of a numerical score makes comparisons, summations, and

trends easier to interpret. The rubrics, which contained written feedback in addition to scores, were also sent to the Department. This was completed in December 2017.

Section 2: Plan for Distributing Completed Rubrics to Units

Detail the College's plan for sharing the completed meta-assessment rubrics with its departments and programs.

As just stated, the rubrics and the departmental scores were sent to the respective departments to be used by the Chairs and other members of the departments for purposes of revising and guiding future assessment strategies. This information was e-mailed to the Chairs in December, 2017. In addition, the members of the MA committee were sent copies of the summative data in January, 2018. This aspect of the process enables the committee members, who worked as members of a 2-person team, to compare one another's ratings and thereby provides an opportunity to consider possible differences in the way each member evaluated the plans. Fortunately, the scores given by members of each team were, overall (90%), quite consistent. In 64 cases, out of approximately 645 scores, the scores differed by 2 (e.g., one rater assigned a 1 when another assigned a 3). This represents approximately 10% of the scores and suggests that some norming may be necessary for the next meta-assessment.

Section 3: Observed Strengths within College Assessment Plans

Detail the general strengths identified by the College after reviewing its units' assessment plans. What general aspects of the annual assessment processes are units mastering? Are there any units that you would recommend serve as exemplary models?

The College of Science and Engineering Technology has 38 degree programs, including a new/revised Composite Science degree and a new doctoral degree in Digital Forensics. Both of these were approved this year and so no findings, results, etc. are available for those plans at this time. Previously, the college housed an Interdisciplinary General Studies program, but it was transferred to the College of Humanities and Social Sciences in 2017. Of these 38 programs, 11 are Masters programs and one is doctoral. One of these, the MA in Biology, has no students enrolled in it at this time. The College also has two centers, the Center for Digital Forensics and the Reeves Center for Mathematics Education.

Before discussing the numerical results, a caveat about the process and its effects on the scores needs to be stated and borne in mind when reviewing the scores. Because of the change in the scale, as well as issues that occurred in the previous year's meta-assessment (see previous report), it is not possible to directly compare this year's results with those from last year. Consequently, this year's results will be discussed largely without reference to those from last year.

The table below shows the number of plans for departments, programs, and centers receiving a score in the range shown. These scores were obtained by first calculating the average score for

each plan based on all measures in the plan. This was done for each rater's scores. These two scores were then averaged to obtain the composite average; i.e., average of rater 1 + average of rater 2)/2.

Overall Score	***# of Departmental Plans (7)***	***# of BA/BS degree plans (25)***	***# of Masters degree Plans (12)***	***# of Centers (2)***	***Total # (46)***
1.0-1.49	0	1 (4%)	1 (8.3%)	2 (100%)	4 (8.7%)
1.5-1.99	2 (28.6%)	2 (8%)	2 (16.7%)	0	6 (13%)
2.0-2.49	3 (42.9%)	6 (24%)	3 (25.0%)	0	12 (26.1%)
2.5-2.99	0	9 (36%)	6 (50%)	0	15 (32.6%
3.0-3.49	0	2 (8%)	0	0	2 (4.3%)
3.5-4.0	2 (28.6%)	5 (20%)	0	0	7 (15.2%)

Number of Plans and Percentages of Plans having *Overall* Scores
with the Values Shown

As is evident from the table, 78.3% of the scores were at least minimally compliant (2.0) or better and, of these, 26.1% scored 3 or higher.

The range of the *average* scores, for both raters, for *each* of the measures in the plans, as well as the cumulative average of these scores for all programs, is given below:

Plan Measures	***Range of Average Scores on Each Measure***	***Cumulative Average for Each Measure***
Goals	1.0-4.0	2.9
Objectives	1.0-3.5	2.7
Indicators	1.0-3.5	2.3
Criterion	1.0-3.5	2.5
Findings	1.0-4.0	2.0
KPIs	1.0-3.5	2.5
Actions	1.0-4.0	1.9
Update on Previous Plan	1.0-4.0	2.3
Current Plan for Improvement	1.0-4.0	2.0

Range of Average Scores for each Measure and the
Cumulative Average of the Individual Scores for the Measures Shown

These results suggest that, *overall*, the departments in the College of Science and Engineering Technology have implemented acceptable assessment plans, though more can be done in most cases to continue improving the process. The Departments of Chemistry and Geography/Geology continue to do well overall and could serve as models for the college. For example, in response to earlier meta-assessments which included information obtained from field camp supervisors, the Department of Geography and Geology implemented a new course designed to give geology majors field experience before completing their end-of-program "field course". The result was an improvement in field course grades. This is an excellent example of the use of data to improve the program. The Department of Chemistry has a highly structured curriculum which facilitates the implementation of key assessments, by specific faculty, at specific points in its program. This type of structure could serve as an example to guide the assessment processes in other programs.

Section 4: Observed Weaknesses within College Assessment Plans

Detail the general weaknesses identified by the College after reviewing its units' assessment plans. What general aspects of the annual assessment process are units struggling with?

Two of the departmental plans (28.5%), three (12%) of the BS degree plans, and three (25%) of the Masters degree plans scored less than 2.0. It should be noted that the SAFE Masters program (score of 1.25) is less than three years old and the assessment plan is still in its early stages of development and implementation. (*The Ph.D. program in Digital Forensics was not included in the analysis, as it has not yet started.) Nonetheless, these plans need to be targeted for improvement.

Speaking more broadly, the departments were weakest in the areas of Findings, Actions, and Current Plans for Improvement, as the average scores for COSET on these measures was 2.0, 1.9, and 2.0 respectively. This is consistent with previous MA findings. In some cases, departments are waiting on additional data to make more informed decisions. In others, the department focused more on revising the assessment instrument and/or the methods of administering it, rather than developing specific plans to address identified weaknesses. However, it is probably the case that, in most cases, the departments may not have a clear conception as to how to best make use of the data to improve their MA process and program.

In a few instances, there appeared to some confusion as to the distinction between the Previous Plan for Continuous Improvement, Actions, and the Current Plan for Continuous Improvement. In essence both the measures and the "tense (as in *past* or *future*) seems to be a source of confusion for some. (For example, are Actions things that *were* done, or which will be done, and how does the latter differ from the Plan for Continuous Improvement?) Because of this confusion, some chairs repeat what is said for these measures, rather than write distinct statements for each, and this results in low scores on these items.

As regards the goals for most departments, these are rated the highest of any other measure with an average score of 2.9. However, as discussed in the last report, it may be appropriate for

some departments to add additional goals, as most departments have only two, or to divide one goal into more than one. In addition, new and/or refined objectives and indicators could be identified by some departments/programs and used to improve their formative assessment procedures. This suggestion stems from the observation that, in some programs, the objectives were of such a nature that they did not directly pertain to skills and knowledge needed by students in the program. For example, writing is obviously an important skill, and was listed as an objective by various programs; however, this skill is not a discipline-specific skill. In such cases, additional objectives of a discipline-specific nature should be added.

Lastly, some of the objectives may have been too broad in that they actually encompassed multiple objectives. For example, if an objective includes assessments of several different skills, and the result is reported as a single composite number, it is not possible to know in which areas students may need further assistance to master the material. Therefore, it would be best to disaggregate composite objectives into separate objectives, each of which could be assessed and acted upon.

These issues will be at least partially addressed in the Spring semester of 2018 through a discussion of assessment and meta-assessment with the COSET Chairs, several of whom are new chairs. The discussion will be led by the Associate Dean and author of this report.

Section 5: Strategies Needed to Address Identified Weaknesses

Detail the College's strategies for addressing the general weaknesses identified after reviewing its units' assessment plans.

As discussed above, some of the problems stem from confusion as to how to interpret the measures by which the plan is evaluated, whereas others stem from such things as lack of knowledge as to how best to proceed. The meeting referenced above will focus on assessment and meta-assessment, and the notes provided for this meeting will become part of a Chairs' Handbook that is being developed by the college. This will help address these issues.

Some of the departments and programs which received high scores were able to make use of external indicators, such as standardized tests. So, when possible, departments may wish to pursue this option. In addition, those that did well had clearly defined and structured procedures for evaluating student performance, as well as rubrics for several measures. Other departments may wish to pursue these options as well and will be strongly encouraged to do so.

As regards specifics, some suggestions for improvement have been identified in the previous section; namely, disaggregating objectives, clarifying the assessment process by providing more information about the procedures and the constraints, making use of data when developing future plans for assessment, and adding more objectives if this will clarify and improve not only the Campus Labs entries, but the assessment process itself.

Section 6: Training/Resources Needed to Implement the College's Improvement Strategy

Detail the types of training and resources that would assist the College with implementing its improvement strategies.

In addition to the issues referenced in the previous section, perhaps the greatest hindrance to improving assessment is the fundamental lack of time that Department Chairs have to invest in the process. With so many responsibilities, it is very difficult for them to devote the necessary time and energy to assessment. Ideally, the Chair should designate one or more members of their departments to assist with this process – and preferably - *virtually all members of the department should be involved in some capacity*. This approach would not only ease the workload of Chairs, but would engage most of the faculty members within the department in the process of assessment. This will foster communication, the development of new ideas and approaches, and ensure that everyone understands the purpose and goals of the assessment process, and why it is necessary for departments to do assessment.

In addition, the Office of Academic Planning and Assessment provides training throughout the year regarding various aspects of assessment. Both Chairs and faculty members will be encouraged by the Associate Dean to attend these sessions. Such training and involvement by departmental members will enable them to understand how the meta-assessment process fits into the bigger picture of driving program improvement for the benefit of our students and for understanding how it relates to both SACS and THECB accreditation requirements. These ideas will be emphasized in the assessment meeting with Chairs.

Appendix A
Spreadsheet Showing Meta-Assessment Results

Program	R1 goals	R2 goals	Goal avg	R1 Obj	R2 Obj	Obj Avg	R1 Ind	R2 Ind	Ind Avg	R1 Crit	R2 Crit	Cri Avg	R1 KPI	R2 KPI	KPI Avg	R1 Find	R2 Find	Find Avg	R1 Act	R2 Act	Act Avg	R1 Upda	R2 Upda	Upd Avg	R1 PCI	R2 PCI	PCI Avg	R1 OvAll score at top	average of individual scores 1st rater	R2 OvAll score at top	average of individual scores 2nd rater	OvAll Avg of score at top	average of average of individual scores of both raters
AGET Dept Plan	4	3	3.5	4	3	3.5	4	2	3	4	2	3	4	3	3.5	4	3	3.5	4	2	3	4	3	3.5	4	3	3.5	4	4.00	3	2.63	3.5	3.31
AGRI Interdisciplinary Agriculture BS	3	3	3	3	3	3	3	3	3	3	3	3	NA	NA	NA	3	3	3	3	3	3	3	3	3	3	3	3	3	3.00	3	3.00	3	3.00
AGRI Ag Business BS	3	3	3	3	3	3	3	3	3	3	3	3	NA	NA	NA	3	3	3	3	3	3	3	3	3	3	3	3	3	3.00	3	3.00	3	3.00
AGRI Ag Engineering Technology BS	3	3	3	3	3	3	3	3	3	3	3	3	NA	NA	NA	3	1	2	3	3	3	3	3	3	3	3	3	3	3.00	3	2.75	3	2.88
AGRI Animal Sci BS	3	3	3	3	3	3	3	3	3	3	3	3	NA	NA	NA	3	3	3	3	2	2.5	3	3	3	3	3	3	3	2.88	3	3.00	3	2.94
AGRI Communications BS	2	3	2.5	2	2	2	2	2	2	2	3	2.5	NA	NA	NA	2	3	2.5	2	2	2	2	2	2	2	2	2	2	2.00	3	2.38	2.5	2.19
AGRI Plant & Soil Science BS	3	3	3	3	3	3	3	3	3	3	3	3	NA	NA	NA	3	2	2.5	3	3	3	3	3	3	3	3	3	3	3.00	3	2.88	3	2.94
AGRI MS	2	4	3	2	3	2.5	2	2	2	2	3	2.5	NA	NA	NA	3	2	2.5	2	3	2.5	1	2	1.5	1	2	1.5	2	1.88	2	2.63	2	2.25
AGRI SAFE	2	2	2	1	1	1	1	1	1	1	1	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	1.25	1	1.25	1	1.25
Total column	25	21	26	24	24	24	24	22	23	24	24	24	NA	NA	NA	24	20	22	22	22	22	22	22	22	22	22	22	24	23.38	24	22.13	24	22.75
Avg column	**2.78**	**3.00**	**2.89**	**2.67**	**2.67**	**2.67**	**2.67**	**2.44**	**2.56**	**2.67**	**2.67**	**2.67**	**NA**	**NA**	**NA**	**2.67**	**2.50**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.75**	**2.67**	**2.71**	**2.67**	**2.69**	**2.67**	**2.70**
ETEC Program Plan	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*		*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
ETEC Construction Management BS	3	4	3.5	2	3	2.5	2	2	2	2	3	2.5	NA	NA	NA	2	3	2.5	1	1	1	3	4	3.5	3	4	3.5	2	2.25	3	3.00	2.5	2.63
ETEC Design&Development BS	3	4	3.5	1	1	1	2	3	2.5	2	3	2.5	NA	NA	NA	2	3	2.5	1	3	2.5	3	4	3.5	3	3	3	2	2.13	3	3.00	2.5	2.56
ETEC Electronics and Computer Eng. Technology	1	2	1.5	2	1	1.5	1	1	1	1	2	1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1 (NA)	1.25	NA	1.50	NA	1.38
ETEC Engineering Technology BS	3	3	3	2	3	2.5	2	2	2	3	2	2.5	NA	NA	NA	3	2	2.5	1	2	1.5	3	2	2.5	3	3	3	2	2.50	3	2.38	2.5	2.44
Total Column	10	5	4.5	4	4	4	7	8	7.5	8	10	9	NA	NA	NA	7	8	7.5	3	6	5	9	10	9.5	9	10	9.5	6	7.13	9	7.63	5	7.38
Avg column	**2.50**	**2.50**	**2.30**	**2.00**	**2.00**	**2.00**	**1.75**	**2.00**	**1.88**	**2.00**	**2.50**	**2.25**	**NA**	**NA**	**NA**	**2.33**	**2.67**	**2.50**	**1.00**	**2.00**	**1.67**	**3.00**	**3.33**	**3.17**	**3.00**	**3.33**	**3.17**	**2.00**	**2.20**	**3.00**	**2.54**	**1.67**	**2.37**
Biology Dept Plan	1	3	2	2	3	2.5	2	3	2.5	2	3	2.5	2	3	2.5	3	2	2.5	2	2	2	2	3	2.5	2	3	2.5	2	2.00	3	2.75	2.5	2.38
BIOL BA/BS	2	3	2.5	2	3	2.5	2	3	2.5	3	2	2.5	NA	NA	NA	1	1	1	2	1	1.5	2	2	2	2	3	2.5	2	2.00	2	2.25	2	2.13
BIOL MA	2	2	2	4	3	3.5	2	3	2.5	2	3	2.5	NA	NA	NA	1	1	1	2	3	2.5	2	4	3	2	3	2.5	1	2.13	3	2.75	2	2.44
BIOL MS	1	2	1.5	1	2	1.5	2	3	2.5	1	3	1.5	NA	NA	NA	1	3	2	1	3	2	1	3	2	1	3	2	1	1.13	3	2.75	2	1.94
BIOL Biomedical Sciences BS	2	2	2	1	3	1.5	1	3	2	1	3	1.5	NA	NA	NA	1	1	1	1	2	1.5	1	2	1.5	1	2	1.5	2	1.13	3	2.25	2.5	1.69
Total column	8	12	10	10	14	11.5	9	15	12	9	14	10.5	NA	NA	NA	7	8	7.5	8	11	9.5	8	14	11	8	14	11	8	8.38	14	12.75	11	10.56
Avg column	**1.6**	**2.4**	**2**	**2**	**2.8**	**2.3**	**1.8**	**3**	**2.4**	**1.8**	**2.8**	**2.1**	**NA**	**NA**	**NA**	**1.4**	**1.6**	**1.5**	**1.6**	**2.2**	**1.9**	**1.6**	**2.8**	**2.2**	**1.6**	**2.8**	**2.2**	**1.6**	**1.68**	**2.8**	**2.55**	**2.2**	**2.11**
Chemistry Dept Plan	3	4		3	4		7	4	7	7	4	7	2	4	2	3	4	3	3	4	3	3	4	3	3	4	3	3	3.00	4	4.00	3	3.00
CHEM BS	3	4		3	4		2	4	2	3	4	3	3	4	3	3	4	3	3	4	3	3	4	3	3	4	3	3	2.88	4	4.00	2.88	2.88
CHEM Forensic Chem	3	4		3	4		2	4	2	3	4	3			3	3	4	3	3	4	3	3	4	3	3	4	3	3	2.88	4	4.00	2.88	2.88
CHEM MS	3	4		3	4		2	4	2	3	4	3	2	4	2	3	4	3	3	4	3	3	4	3	3	4	3	3	2.88	4	4.00	2.88	2.88
Total column	12			12			6		6	9		9	5		8	12		12	12		12	12		12	12		12	12	10.88		0.00	11.64	11.64
Avg column	3.00			3.00			2.00		2.00	3.00		3.00	1.67		2.70	3.00		3.00	3.00		3.00	3.00		3.00	3.00		3.00	3.00	2.88		0.00	2.91	2.91
Composite Science BS	4	4		4	4		4	4	4	4	4	4	4	4	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Dev (4)	4.00	Dev 4	4.00	4	4.00
COSC Dept Plan	4	3	3.5	4	3	3.5							3	3	3	2	2	2	1	1	1	3	3	3	1	1	1	2	1.88	2	1.63	2	1.75
COSC Center for Excel in Digital Forensics	3	3	3	2	2	2	2	1	1.5	3	2	2.5	1	2	1.5	1	1	1	1	1	1	2	1	1.5	2	1	1.5	2	2.00	1	1.50	1.5	1.75
COSC Computer Software Eng. Tech BS	3	3	3	3	3	3	2	3	2.5	2	3	2.5	NA	NA	NA	2	3	2.5	2	2	2	3	2	2.5	3	2	2.5	2	2.50	3	2.63	2.5	2.56
COSC Computing and Information Science MS	3	3	3	2	1	1.5	3	4	3.5	3	4	3.5	NA	NA	NA	2	3	2.5	1	1	1	3	3	3	1	2	1.5	2	2.25	3	2.63	2.5	2.44
COSC Computing Science BS	3	3	3	2	2	2	3	3	3	2	3	2.5	NA	NA	NA	2	4	3	2	4	3	3	4	3.5	3	3	3	2	2.50	3	3.25	2.5	2.88
COSC Digital and Cyber Forensics Eng Tech BS	3	3	3	3	2	2.5	2	2	2	2	2	2	NA	NA	NA	1	1	1	1	1	1	1	1	1	1	1	1	1	1.75	1	1.63	1	1.69
COSC Digital Forensics MS	2	2	2	2	3	2.5	3	4	3.5	3	3	3	NA	NA	NA	2	2	2	2	2	2	3	3	2.5	3	3	3	2	2.50	3	2.63	2.5	2.56
COSC Info Assurance and Security MS	1	4	1	2	4	2	2	4	2	1	4	1	2	NA	NA	1	4	1	1	4	1	1	4	1	1	4	1	1	1.25	4	4.00	1	2.63
COSC Digital and Cyber Forensics PhD	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
Total column	22	20	21.5	20	16	19	17	17	18	16	17	17	4	5	4.5	13	12	15	12	11	12	18	17	18	15	13	14.5	14	16.63	16	15.38	15.5	16.00
Avg column	**2.75**	**2.86**	**2.69**	**2.50**	**2.29**	**2.38**	**2.43**	**2.83**	**2.57**	**2.29**	**2.83**	**2.43**	**2.00**	**2.50**	**2.25**	**1.63**	**2.00**	**1.88**	**1.50**	**1.57**	**1.50**	**2.25**	**2.43**	**2.25**	**1.88**	**1.86**	**1.81**	**1.75**	**2.15**	**2.29**	**2.33**	**1.94**	**2.24**
Geog/Geol Dept Plan	4	3	3.5	4	3	3.5	NA	NA	NA	NA	NA	NA	4	3	3	4	3	3.5	2	2	2	2	3	2.5	2	3	2.5	3	#VALUE!	3	#VALUE!	3	#VALUE!
GEOL BS Geology	4	4	4	4	4	4	4	4	4	3	4	3	NA	NA	NA	3	4	3	1	4	1	4	4	4	1	4	1	3	3.00	4	4.00	3	3.00
GEOG Geography BA	4	4	4	4	4	4	3	4	3	2	4	2	NA	NA	NA	4	4	4	4	4	4	4	4	4	4	4	4	4	3.63	4	4.00	4	3.63
GEOG Geography BS	4	4	4	4	4	4	3	4	3	2	4	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3.63	4	4.00	4	3.63
GEOG Geographic Information Systems MS	2	5	2	3	3	3	2	3	2.5	3	3	3	1	1	1	3	3	3	2	1	1.5	2	3	2.5	2	3	2.5	2	2.38	3	3.00	2.5	2.69
Total column	18.0	8.0	17.5	19.0	6.0	18.5	12.0	3.0	2.5	10.0	3.0	10.0	9.0	8.0	8.0	18.0	6.0	17.5	13.0	3.0	12.5	16.0	6.0	17.0	13.0	6.0	14.0	16.0	14.88	6.0	5.13	16.5	14.95
Avg column	**3.60**	**4.00**	**3.50**	**3.80**	**3.00**	**3.70**	**3.00**	**3.00**	**2.50**	**2.50**	**3.00**	**2.50**	**3.00**	**2.67**	**2.67**	**3.60**	**3.00**	**3.50**	**2.60**	**1.50**	**2.50**	**3.20**	**3.00**	**3.40**	**2.60**	**3.00**	**2.80**	**3.20**	**3.11**	**3.00**	**2.94**	**3.30**	**2.99**
Math/Stat Dept Plan	4	3	3.5	4	3	3.5	1	1	1	1	1	1	2	2	2	1	1	1	3	1	3	3	1	2	1	1	1	1	2.25	3	1.67	2	2.00
MATH BA/BS	3	3	3	3	2	2.5	3	2	2.5	2	2	2	NA	NA	NA	1	1	1	1	1	1	3	1	2	3	1	2	1	2.38	2	1.63	1.5	2.00
MATH MA	2	3	2.5	2	2	2	2	2	2	2	3	2.5	NA	NA	NA	2	1	1.5	2	1	1.5	3	1	2	1	1	1	1	2.00	2	1.75	1.5	1.88
MATH MS Mathematics	4	4	4	4	3	3.5	4	3	3.5	4	3	3.5	NA	NA	NA	2	3	2.5	3	1	2	3	1	2	1	1	1	1	3.13	3	2.38	3	2.75
MATH Reeves Center	3	2	2.5	3	2	2.5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	2	1	1	1	1	1.75	2	1.25	1.5	1.50
MATH MS Statistics	3	3	3	3	3	3	2	2	2	3	2	2.5	NA	NA	NA	3	1	2	3	1	2	3	1	2	1	1	1	1	2.63	3	1.75	2	2.19
Total column	19	18	18.5	19	15	17	13	11	12	13	12	12.5	3	3	3	10	7	9	13	5	10.5	18	6	12	8	6	7	8	14.13	15	10.00	11.5	12.06
Avg column	**3.17**	**3.00**	**3.08**	**3.17**	**2.50**	**2.83**	**2.17**	**1.83**	**2.00**	**2.17**	**2.00**	**2.08**	**1.50**	**1.50**	**1.50**	**1.67**	**1.40**	**1.50**	**2.17**	**1.00**	**1.75**	**3.00**	**1.00**	**2.00**	**1.33**	**1.00**	**1.17**	**1.33**	**2.35**	**2.50**	**1.72**	**1.92**	**2.04**
Physics Dept Plan	3	2	2.5	3	2	2.5	1	1	1	1	1	1	2	2	2	1	1	1	3	1	2	3	1	2	1	1	1	1	2.00	2	1.25	1.5	1.63
PHYS BS	3	2	2.5	3	2	2.5	3	2	2.5	3	3	3	NA	NA	NA	3	1	2	3	1	2	1	1	1	1	1	1	1	2.50	2	1.63	1.5	2.06
Total column	6	4	5	6	4	5	4	3	3.5	4	4	4	2	2	2	4	2	3	6	2	4	4	2	3	2	2	2	2	4.50	4	2.88	3	3.69
Avg column	**3**	**2**	**2.5**	**3**	**2**	**2.5**	**2**	**1.5**	**1.75**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**1.5**	**3**	**1**	**2**	**2**	**1**	**1.5**	**1**	**1**	**1**	**1**	**2.25**	**2**	**1.44**	**1.5**	**1.84**
Cumulative total for each indicator (includes scores from both raters)			236			224			185			195			63			162			149			184			162						#VALUE!
# of scores used for average			82			82			79			79			25			80			79			80			80						
Cumulative average			2.9			2.7			2.3			2.5			2.5			2			1.9			2.3			2						
Orange = individual who gave all 4s to all items and so his scores were not counted in any calculations																																	
Yellow = greater than 1-point difference between raters																																	