

Report on the SCCC Student Evaluation of Instruction (SCCC SEI) Measure Fall 2002 Administration

Prepared by the SCCC Office of Institutional Research & Assessment

Note: College norms appear on page 4. The SCCC SEI questionnaire appears at the end of the report.

Sample

A sample of 620 day faculty participated in the Fall 2002 administration of the SCCC SEI, and a total of 11,722 forms were completed.

Items Means & Standard Deviations

It is important to note that students rated faculty very highly on all items on the SCCC SEI form. The average score over all the items was 4.31 ranging from 3.94 (mean score for “My interest in the subject area of this course has increased.”) to 4.68 (mean score for “The instructor is well-prepared for each class meeting.”) The median score for 7 of the 11 items was 5, and for the remaining 4 items was 4. These items were all heavily negatively skewed (skew range -0.98 to -2.41), with most of the scores for every item being 5. Such skew indicates little measurement sensitivity at the high end of the scale. Given the severity of the skew, or tendency of most instructors to receive very high ratings, the measure may not discriminate between high quality instruction and very high quality of instruction (see Table 1).

Table 1. Summary statistics

Item	Valid N	Mean*	Std. Dev.
The instructor is prepared for each class meeting	11672	4.678	0.655
The instructor makes course material clear and understandable	11643	4.313	0.980
The instructor responds to student questions clearly and thoroughly	11620	4.406	0.920
The instructor makes effective use of class time	11639	4.490	0.855
The instructor evaluates student academic performance fairly	11515	4.459	0.852
The instructor returns student work in a timely manner	11409	4.531	0.797
I would recommend this instructor	11559	4.405	1.026
My interest in the subject area of this course has increased	11502	3.934	1.171
I was challenged by this course	11538	4.037	1.064
This class met my expectations	11529	4.040	1.091
I studied and put effort into this course	11565	4.167	0.960

Average rating on a 1(strongly disagree) to 5 (strongly agree) scale

Individual Report & Norms

Participating instructors were provided with a report containing comparative data for the SCCC SEI, as well as instructions for interpreting individual class results (see Table 2). As this was the first administration of the revised SCCC SEI, faculty and administrators are cautioned to view the results conservatively. Additional normative data is presented in Table 3, which provides a percentile rank for each of the items. Instructors can determine the percentile rank of their class average for any item by matching it to the scores within the table. For example, if the class average for the first item “The instructor is prepared for each class meeting.” is 4.77, then the instructor/class would be at the 50th percentile among SCCC peers for item one. Each item has slightly different norms.

Table 2. Sample individual report

Campus, SEC #, Instructor Name

	Count	Class Avg.	SD
The instructor is prepared for each class meeting.....College Avg. = 4.68 SD = .34	14	5.00	.00
The instructor makes course material clear and understandable.....College Avg. = 4.31 SD = .59	14	4.93	.27
The instructor responds to student questions clearly and thoroughly..College Avg. = 4.41 SD = .53	14	4.86	.36
The instructor makes effective use of class time.....College Avg. = 4.48 SD = .45	14	4.79	.43
The instructor evaluates student academic performance fairly.....College Avg. = 4.46 SD = .45	14	4.79	.43
The instructor returns student work in a timely manner.....College Avg. = 4.52 SD = .45	14	4.50	.65
I would recommend this instructor.....College Avg. = 4.40 SD = .62	14	5.00	.00
My interest in the subject area of this course has increased.....College Avg. = 3.94 SD = .62	14	4.64	.50
I was challenged by this course.....College Avg. = 4.04 SD = .52	14	4.57	.65
This class met my expectations.....College Avg. = 4.04 SD = .56	14	4.50	.65
I studied and put effort into this course.....College Avg. = 4.17 SD = .39	14	4.57	.51

This report contains the results of the Fall 2002 administration of the Student Evaluation of Instruction form, as well as normative data for the college. Appearing in the table above are the number of students who completed each item (see column labeled "Count"), your class average (Class Avg.), and the class standard deviation (SD) - a measure of the variability among the student ratings. The report also contains the college average (the average class rating based data from 620 sections) and college standard deviation for each item. More detailed norms can be found at the SCCC Institutional Research & Assessment website at <http://instsrv.sunysuffolk.edu/>

*Prepared by the SCCC Office of Institutional Research & Assessment
March, 2003*

Table 3. Normative data

Fall 2002 Student Evaluation: College Norms (N _{sections} = 620)										
Item	College Mean	Percentiles								
		10th	20th	30th	40th	50th	60th	70th	80th	90th
Q1. The instructor is prepared for each class meeting.	4.68	4.25	4.50	4.63	4.71	4.77	4.82	4.88	4.93	5.00
Q2. The instructor makes course material clear and understandable	4.31	3.47	3.93	4.13	4.32	4.46	4.60	4.70	4.81	4.89
Q3. The instructor responds to student questions clearly and thoroughly.	4.41	3.66	4.06	4.27	4.44	4.56	4.67	4.78	4.84	4.91
Q4. The instructor makes effective use of class time.	4.48	3.88	4.21	4.39	4.50	4.60	4.67	4.75	4.84	4.91
Q5. The instructor evaluates student academic performance fairly.	4.46	3.94	4.20	4.33	4.47	4.56	4.65	4.73	4.81	4.90
Q6. The instructor returns student work in a timely manner	4.52	3.91	4.25	4.44	4.53	4.64	4.74	4.80	4.86	4.94
Q7. I would recommend this instructor.	4.40	3.56	4.00	4.29	4.44	4.60	4.71	4.80	4.89	4.97
Q8. My interest in the subject area of this course has increased.	3.94	3.15	3.47	3.67	3.87	4.00	4.15	4.33	4.50	4.68
Q9. I was challenged by this course.	4.04	3.33	3.64	3.83	4.00	4.10	4.23	4.33	4.50	4.67
Q10. This class met my expectations.	4.04	3.29	3.61	3.82	4.00	4.13	4.24	4.36	4.50	4.70
Q11. I studied and put effort into this course.	4.17	3.64	3.89	4.00	4.10	4.19	4.27	4.37	4.50	4.65

Note:

A class average of 4.77 on question 1 (Q1) would be at the 50th percentile

A class average of 4.50 on question 9 (Q9) would be at the 80th percentile

Reliability Results

Overall the inter-item reliability was good ($\alpha = .90$), and reliability of individual items was acceptable. A factor analysis of the measure also indicates that the form assesses two independent dimensions of learning - quality of instruction and student outcomes (see validity section below). Each of the scales attained high inter-item reliability (Quality of Instruction $\alpha = .90$; Student Outcome $\alpha = .80$) (see Table 4).

Table 4. Factor loadings and reliability estimates for each of the items on the form.

Item	Reliability	Factor	
		Quality of Instruction	Student Outcomes
The instructor is prepared for each class meeting	0.66	0.633	
The instructor makes course material clear and understandable	0.84	0.796	
The instructor responds to student questions clearly and thoroughly	0.82	0.779	
The instructor makes effective use of class time	0.77	0.716	
The instructor evaluates student academic performance fairly	0.74	0.698	
The instructor returns student work in a timely manner	0.58	0.543	
I would recommend this instructor	0.87	0.808	
My interest in the subject area of this course has increased	0.76		0.619
I was challenged by this course	0.66		0.638
This class met my expectations	0.85		0.68
I studied and put effort into this course	0.65		0.629
Eigenvalues and % of variance accounted for by each factor		5.84 (53.1%)	1.25 (11.5%)
Coefficient alpha		0.904	0.803

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 3 iterations.

Validity Results

The SCCC SEI was designed to be a measure of instructional quality and student learning outcomes. Individual items were modeled to reflect Centra's (1993) dimension of teaching effectiveness. As can be seen in Table 5, the SCCC SEI items can be linked to 5 of the 6 construct dimensions. To further confirm the structure of the SCCC SEI measure, a factor analysis was performed on the 11 items for a sample of 10,663 completed forms. An examination of the factor loadings appearing in Table 4 (above), indicates that the items group

together to provide independent measures of instructional quality and student learning outcomes. The statistical evidence¹ also indicates that no additional factors can be extracted. Combined, the two factors accounted for a substantial proportion (approximately 64%) of the variability within the set of 11 items.

Table 5. Alignment of SEI items with SIR-II Constructs

SIR-II Constructs	SEI Items
Course organization & planning	The instructor is prepared for each class meeting
	The instructor makes effective use of class time
Communication	The instructor makes course material clear and understandable
	The instructor responds to student questions clearly and thoroughly
Faculty/student interaction	<i>No SEI item addresses this construct</i>
Assignments, exams, grading	The instructor evaluates student academic performance fairly
	The instructor returns student work in a timely manner
Course outcomes	My interest in the subject area of this course has increased
Student effort & involvement	I was challenged by this course
	I studied and put effort into this course
<i>No SIR-II construct addresses similar items</i>	I would recommend this instructor
	This class met my expectations

These results provide evidence for the construct validity of the SCCC SEI. However, in subsequent administrations of the SEI form it may be valuable to provide summary data on the Quality of Instruction and Student Outcomes subscales in addition to the overall ratings on each item in both the individual faculty and the normative reports. Such information may provide better discrimination among high rating. It is also recommended that an item or two be added that directly assesses faculty/student interaction.

¹ Kaiser's minimum Eigenvalue criterion (of 1.00), and an analysis of scree.

Results for Potential Sources of Bias: Faculty Rank, Student and Faculty Gender, Student Status, Cumulative Credits, and Expected Grades

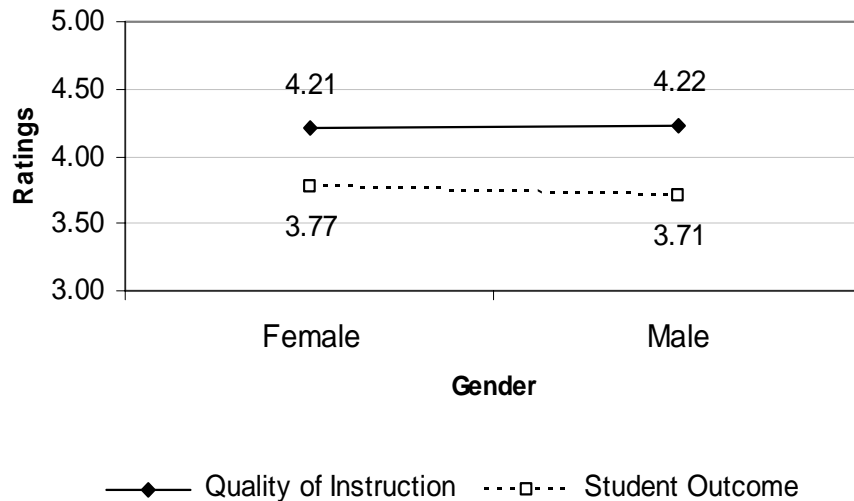
Results show no significant effect of faculty rank on quality of instruction or on student outcome ($p > .05$). For further details see Table 6.

Table 6. Descriptive statistics on ratings according to faculty rank.

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Quality of Instruction Factor	Instructor	206	4.4390	.45946	.03201	4.3759	4.5022	2.18	5.00
	Asst Professor	166	4.4318	.47511	.03688	4.3590	4.5046	1.86	5.00
	Assoc Professor	102	4.4588	.38891	.03851	4.3824	4.5352	3.30	5.00
	Professor	195	4.3818	.47415	.03395	4.3148	4.4488	2.39	5.00
	Total	669	4.4236	.45770	.01770	4.3888	4.4583	1.86	5.00
Student Outcome Factor	Instructor	206	3.9870	.47802	.03331	3.9214	4.0527	2.27	4.95
	Asst Professor	166	3.9729	.49680	.03856	3.8968	4.0490	2.39	4.88
	Assoc Professor	102	4.0021	.46971	.04651	3.9099	4.0944	2.69	4.88
	Professor	195	4.0043	.51345	.03677	3.9317	4.0768	1.86	5.00
	Total	669	3.9908	.49109	.01899	3.9536	4.0281	1.86	5.00

Consistent with the literature on valid forms, results show little or no effect of student gender on their ratings of instruction. As shown in Figure 1, although it is significant ($p < .05$) because of the very large sample, the effect size for gender is very small for both quality of instruction ($r = .02$) and student outcomes ($r = .07$) and inconsequential².

Figure 1. The association between ratings and student gender.



Similarly, student-gender-based rating differences were not significantly different for male and female instructors on quality of instruction ($p > .05$). And although male students gave significantly higher ratings ($p < .05$) on student outcome in courses taught by male instructors than they did in courses taught by female instructors, the effect size for this difference was small ($p = .045$)³ and negligible (see Figures 2 and 3).

² Male and female student ratings differ by approximately .02 of a standard deviation for quality of instruction, and approximately .07 of a standard deviation for student outcomes.

Figure 2. Quality of instruction ratings by student gender x instructor gender.

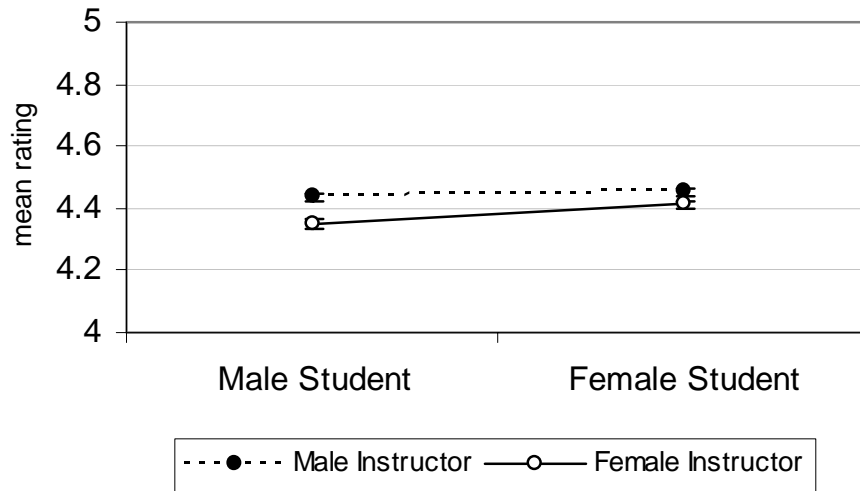
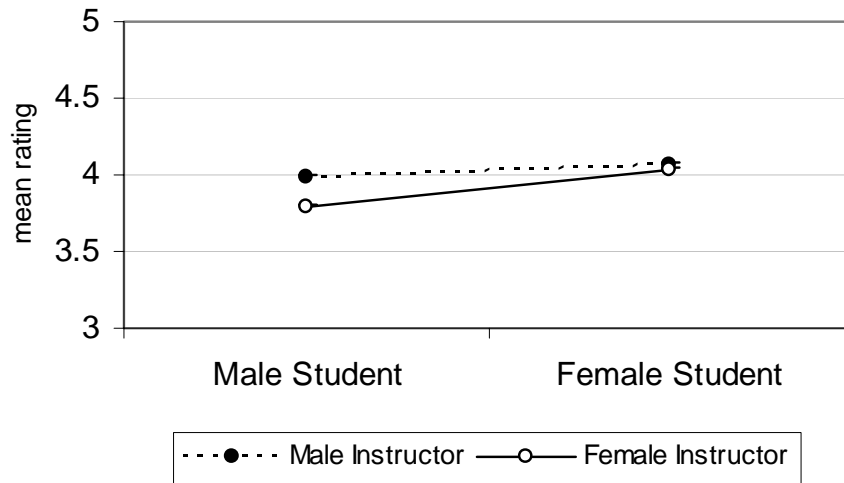


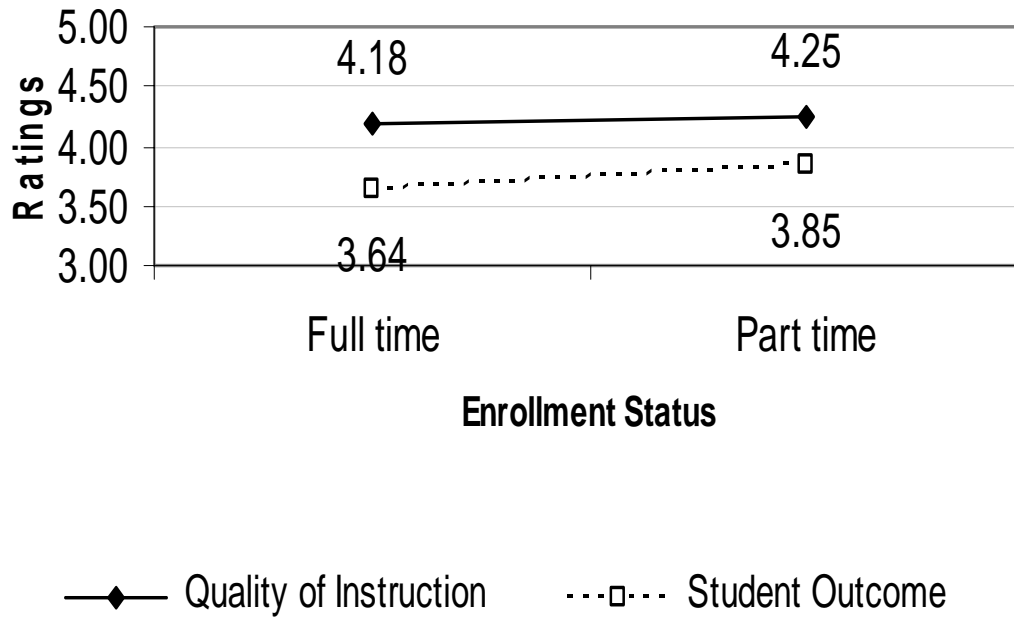
Figure 3. Student outcome ratings by student gender x instructor gender.



³ The student gender x faculty gender interaction account for 0.2% of the variance in ratings.

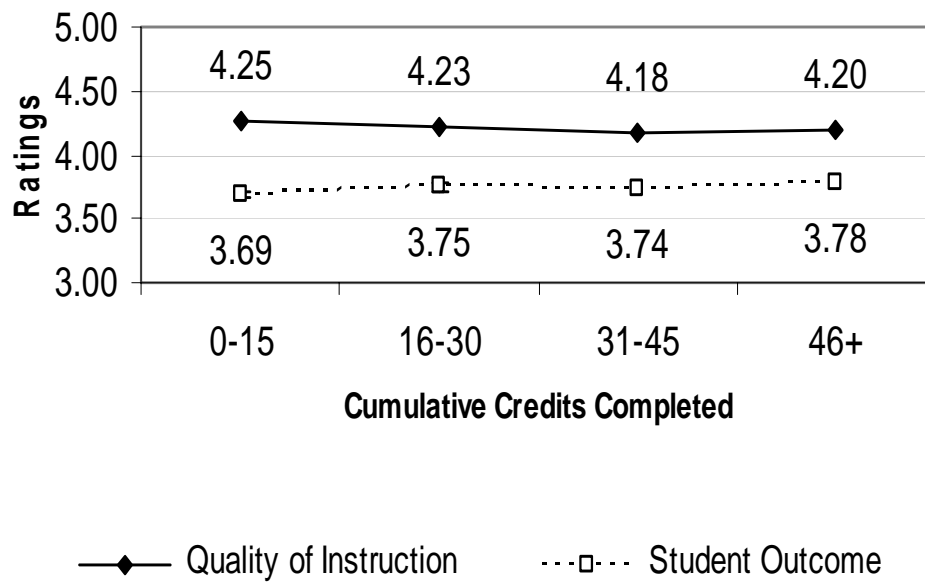
Rating differences between part-time and full-time students (enrollment status) although statistically significant ($p < .05$), are also trivial for both quality of instruction ($r = .04$) and student outcomes ($r = .11$) (see Figure 4).

Figure 4. The association between ratings and enrollment status.



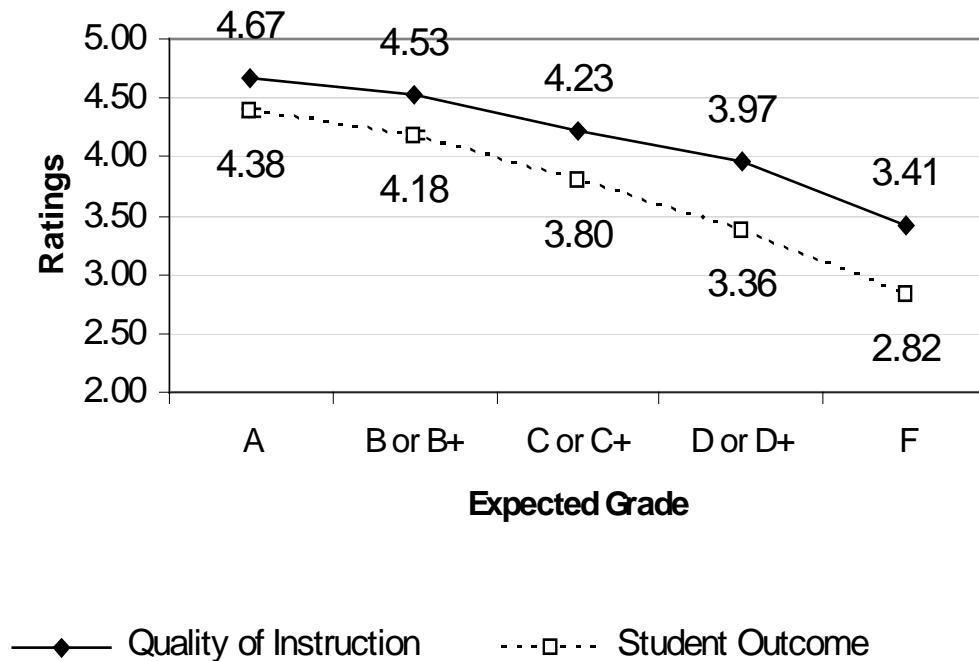
Cumulative credits (which may be conceptualized as representative of class level), are significantly related to student ratings ($p < .05$), but the effect size is very small and unimportant for both quality of instruction ($r = -.009$) and student outcomes ($r = .08$) (see Figure 5).

Figure 5. The association between student ratings and cumulative credits.



Ratings on SCCC SEI are significantly related to course grades ($p < .05$; see Figure 6) with higher ratings associated with expectation of higher grades. The effect size for quality of instruction ($r = .281$) and student outcomes ($r = .245$) indicate that expected grade has a moderately meaningful impact on student ratings.

Figure 6. Association between expected course grade and student ratings.



The effect of expected grades or grading leniency is perhaps the most controversial and most researched of the potential biases to student ratings (Arreola, 1995). To the degree that higher grades reflect greater learning, a positive relationship between grades and learning, is appropriate and should be expected. Research on the grading leniency effect indicates that the

effect is both weak and unsubstantial (Braskamp & Ory, 1994; Feldman, 1976; Marsh & Dunkin, 1992; Marsh & Roche, 1997). Most of the correlation between grades and ratings can be accounted for by self-reported student learning (Howard & Maxwell, 1980, 1982), which supports the hypothesis that teaching effectiveness influences both grades and ratings, therefore student ratings are valid. However, other possible hypotheses have been posed to explain this association (Cashin, 1995): 1) student motivation (general or course specific) influences both learning and ratings, and is controlled for statistically; or 2) students give high ratings in appreciation for lenient grading.

References

Arreola, R. A. (1995). Developing a comprehensive faculty evaluation system: A handbook for college faculty and administrators on designing and operating a comprehensive faculty evaluation system. Bolton, MA: Anker Publishing Co.

Braskamp, L. A., & Ory, J. C. (1994). Assessing faculty work: Enhancing individual and institutional performance. San Francisco: Jossey-Bass.

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Centra, J. A. (1993). Reflective faculty evaluation: Enhancing teaching and determining faculty effectiveness. San Francisco: Jossey-Bass.

Feldman, K. A. (1976). Grades and college students' evaluations of their courses and teachers. Research in Higher Education, 4, 69-111.

Howard, G. S. & Maxwell, S. E. (1980). The correlation between student satisfaction and grades: A case of mistaken causation. Journal of Educational Psychology, 72, 810-820.

Howard, G. S. & Maxwell, S. E. (1982). Do grades contaminate student evaluations of instruction? Research in Higher Education, 16, 175-188.

Marsh, H. W., & Dunkin, M. (1992). Students' evaluations of university teaching: A multidimensional perspective. In J. C. Smart (Ed.), Higher Education: Handbook of theory and research (Vol. 8, pp. 143-233). New York: Agathon.

Marsh, H. W., & Roche, L. A. (1997). Making students' evaluation teaching effectiveness effective: The critical issues of validity, bias and utility. American Psychologist, 52, 1187-1197.

TO THE STUDENT: In your evaluation, please remember you are not judging the instructor on the basis of personality, popularity or the subject areas that the course covers. Rather, you are evaluating the instructor on how effectively he or she performs the function of teacher. Current procedures assure that your response to this survey will be kept in strictest confidence. Your participation will help the college with the quality of instruction.

Please use a Number 2 pencil to blacken in the oval next to the appropriate response.

CORRECT MARK

Incorrect Marks

Instructor: _____

The items to the right are required.

Year

20

<input type="radio"/>	0
<input type="radio"/>	1
<input type="radio"/>	2
<input type="radio"/>	3
<input type="radio"/>	4
<input type="radio"/>	5
<input type="radio"/>	6
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<input type="radio"/>	8
<input type="radio"/>	9

Semester

Intercession
 Spring
 Summer
 Fall

Campus

Ammerman
 Eastern
 Western

Section Number

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<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Gender

Female
 Male

Enrollment

Full time
 Part time

Prior to this semester, how many credits have you completed?

0-15 credits
 16-30 credits
 31-45 credits
 46+ credits

Do not write your name on the evaluation. It is meant to be anonymous and is not looked at by the instructor until the final grades have been entered.

Using the scale of 1-5 where 5=Strongly Agree and 1=Strongly Disagree, darken the oval next to your response for the following:



The Instructor

	5	4	3	2	1	Not Applicable
is prepared for each class meeting.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
makes course material clear and understandable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
responds to student questions clearly and thoroughly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
makes effective use of class time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
evaluates student academic performance fairly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
returns student work in a timely manner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would recommend this instructor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The student

	5	4	3	2	1	Not Applicable
My interest in the subject area of this course has increased.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was challenged by this course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This class met my expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I studied and put effort into this course.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What grade do you expect to receive in this course?

A B or B+ C or C+ D or D+ F Other (i.e., Inc., Audit)

Please continue on reverse side.

Note: Open-ended questions appear on the reverse side of this form.