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# Scantron Exam Scoring Services Faculty Guide

The purpose of this booklet is to explain how you will be able to utilize machine scoring exam services provided by Testing and Evaluation Operations (TEO). Please review this guide or contact our office prior to submitting an exam if you have any questions.

This guide will explain the following:

- How to administer an exam for machine scoring
- How to prepare and submit exams for scoring
- Report options for exam results
- Enhanced exam scoring options such as learning objectives (subtests), question point values/weighted scores, extra credit, custom grade scales, and multiple correct responses for items.

The standard processing time for exams is 3 hours (under normal circumstances). Your exam will be scanned immediately upon receipt, whenever it is possible. TEO will contact you (via the method specified on the Exam Scoring Request Form) once your exam has been electronically scored.

If you have any questions or need additional information about this or any of our other services, please contact us. Our regular business hours are Monday through Friday, 8:00 – 4:30 during Fall and Spring semesters, and 7:30 – 4:30 Monday through Thursday and 7:30 – 12:00 on Friday during the Summer semester.

TEO is located within McAfee Gym, Suite 2000.  
The main office phone number is 217-581-6696.

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## Administering an Exam for Machine Scoring

### Scannable Forms:

Exams are scored by scanning forms with an Insight 4ES scanner, and then processing scanned data in a program to create a results set. Effective Fall 2007 Semester, Testing and Evaluation began using Remark Classic OMR software to process exam data.

To have exams machine scored, you must have your students provide their answers on the scannable forms supplied by TEO.

There are two types of forms:

- Pink or GP5 (most commonly used): This form will accommodate up to 200 questions, and provides 5 response choices per item. There is a very small area on the back of the form for writing.
- Green or GP10: This form will accommodate up to 90 items, with 10 response choices per item. There is a small area on the back of the form for writing.

Forms can be picked up at the main reception office (McAfee 2010) located on the 2nd floor, northeast corner of McAfee Gym. Our staff will be happy to answer any questions you may have about the available forms.

### Instructions for Students:

To ensure accurate scoring, please provide the following instructions to your students:

- **Students will need to use a #2 pencil** to mark responses.
- Blacken the response circles completely, dark enough so that the letter inside the response choice cannot be seen.
- Erase carefully and completely.
- Make no stray marks.
- Do not fold or tear scannable response forms.
- Complete the last and first name grids, and **blacken the corresponding circles.**
- If you wish to receive the Gradebook Report and intend to import it into Desire2Learn (D2L), then the ID field **must** be completed by each student. Please see the *“Interpreting Exam Results”* section of this guide for more information regarding Gradebook Report.
- If you wish, you will be able to administer up to 5 versions of an exam to reduce the risk of cheating. Please see the *“Interpreting Exam Results”* section of this guide for more information regarding reporting options when utilizing multiple test forms.

Once the exam has been administered, you will be ready to submit it for scoring.

## Preparing and Submitting Exams for Machine Scoring

Exams can be submitted for machine scoring to Testing and Evaluation either by you or a representative of your department.

The exam submission and collection desk is located at the main reception desk in the northeast 2nd floor corner of McAfee Gym (McAfee 2010). For security reasons, exams will not be accepted via campus mail. Our regular business hours during the Fall and Spring semesters are Monday through Friday, 8:00 – 4:30. If you wish to submit an exam after hours, a mail slot is available in the TEO suite door (McAfee 2000).

To have your exam for machine scored, you will need to do three things:

1. Prepare Exam Forms for Scanning.
2. Prepare an answer key.
3. Complete an Exam Scoring Request Form.

### Preparing Exam Forms for Scanning:

Please stack scannable forms so that they are all facing in the same direction, remove any blank forms, and place them in a manila envelope. Please write your name and department on the front of the envelope. The scanning software will produce results reports in alphabetical order regardless of the order the exam forms are placed. Testing and Evaluation has envelopes available for your use if you do not have one. If you are dropping exams in the after-hours slot, it is imperative that scannable sheets be placed in a sealed manila envelope.

### **If you are using multiple exam forms/versions:**

If you are using more than one version of your exam to prevent cheating, you will need to prepare a separate key for each version. The test form block is used to indicate which test form the key is for, allowing up to 5 test forms. Blacken the appropriate test form circles (A, B, C, D, or E) on each exam key. Place the keys on the top of the stack of forms. Individual student response (scannable) sheets do not have to be sorted by test form; however, **you will need to ensure that all examinees blacken the appropriate test form circle on their forms. Scanned forms that do not have the appropriate circle blackened will not be scored with the corresponding key.** Please see the *“Interpreting Exam Results”* section of this guide for more information regarding reporting options when utilizing multiple test forms.

### Preparing Your Answer Key:

An **answer key** is required for machine scoring of exams. If you are using the same exam for more than one section, you need only submit one key.

To complete an answer key, you will need to do the following:

- **Name Block:** Write the word “Key” in the first three boxes of the “Last Name” block, and blacken the corresponding circles.
- **Test Form Block:** If you are using more than one version of your exam, you will need to prepare a separate key for each version. Blacken the appropriate test form (A, B, C, etc.).
- **Answer Block:** Blacken the corresponding circle for the correct answer to each question dark enough that the letter inside the circle cannot be seen.
- **Course/Section/Instructor Free-form Block:** If you wish, you may write your name and the course and section in this block, so that the key is more easily identifiable.

## **Completing the Exam Scoring Request Form:**

An Exam Scoring Request Form is required upon submission. This form will provide our office with the information needed to provide optimum service to you. The form is available at the main reception desk in McAfee Gym, and online at <http://www.eiu.edu/acatest/>. If you are submitting an exam after hours, this form is also available at the after-hours mail slot. A sample of the form is at the end of this booklet. Side 2 of the Exam Scoring Request Form is required **only** if your exam contains Enhanced Exam Options.

### **Side 1: Standard Exam Information**

Completion of Side 1 of the Exam Scoring Request Form is mandatory. This portion of the form is divided into the following three sections:

#### **1. Instructor and Basic Exam Format Information:**

Thorough completion of this section ensures that Testing and Evaluation is able to process your exam expeditiously, and can contact you should any questions arise.

The “Exam Title” will appear in the heading of the Student Statistics Report, and is required when receiving exams electronically. If you are submitting more than one section or exam, you may write both titles in this area, but you will need to be certain that both keys and batches of scannable forms are **separated**, paper clipped, and **clearly labeled**.

If you are using multiple exam forms, check the box directly under the “Exam Title” field, and indicate the number of forms/exam keys that are utilized.

There are 2 options for receiving exam reports:

- **Printed:** Reports will be printed at TEO and we will call you to pick up the exam when it is ready. For security reasons, exam results cannot be sent via campus mail. If you wish to be contacted via e-mail (rather than receive a phone call), please note this in the “Special Instructions” area at the bottom of Side 1 of the request form.

- **Electronic:** Results will be uploaded to a secure website. When your exam has been processed, you will receive an e-mail from TEO with the link to the exam, and will be required to log on to this site using your EIU network id and password. Once you have logged in, a list of exams that you have had processed at TEO will be available (you will only be able to see your own exams). You can then access and print your exam results. Reports will be in .pdf format, and Gradebook Reports will either be in a spreadsheet (.xlsx) or comma delimited (csv) file, depending on the format chosen in the Reporting Options Section of the request form.

Results are available at the same link for every exam scored. You may access it at any time: <https://www.eiu.edu/~examresults/login.php>.

For security purposes, electronic copies of reports cannot be sent to you as an e-mail attachment; they can only be uploaded to the secure website.

If you have chosen electronic reports, then paper copies of the reports will not be printed at Testing and Evaluation.

Scanned forms will be returned to you via campus mail. If you wish to pick up scanned forms at TEO instead, please note this in the “Special Instructions” area at the bottom of Side 1 of the Exam Scoring Request Form.

## 2. Reporting Options:

In this section, you will indicate which exam results reports you wish to receive. When selecting reports, be aware that each report requires time and resources to create. Please select only the reports that you need. Please refer to the “*Interpreting Exam Results*” section of this booklet for a comprehensive description of each report, or contact TEO at 217-581-6696.

There are three categories of reports:

### Student Exam Scores:

Reports in this category display individual student scores in various formats. These include:

- Student Statistics Report – “alpha list” containing raw score, percent score, & letter grade.
- Student Response Report – a grid presenting student scores and responses to each exam question in each row, and percent correct for each question in each column.
- Student Grade Report – a table for each individual student containing exam scores and a list of questions the student answered incorrectly.
- Gradebook Report for Desire2Learn (D2L) – student scores formatted for import into D2L.
- Gradebook Report in Excel file format – student scores in an Excel Spreadsheet.

### Analysis of Whole Exam:

Reports in this category display data pertaining to the exam as a whole. These include:

- Class Frequency Distribution Report – includes frequency distribution and exam mean.
- Test Statistics Report – includes exam mean, median, and range of scores, standard deviation, percentiles, confidence intervals, and test reliability data.
- Condensed Test Statistics & Item Analysis Report – a summary of basic exam statistics, including exam mean, median, standard deviation, and test reliability, along with basic analysis of exam questions, including response frequencies, and point biserial calculation.
- Test Analysis Report - overview of test data that may require additional attention

### Analysis of Exam Questions:

Reports in this category display data pertaining to each question on the exam. These include:

- Detailed Item Analysis Report – a graphical display of response frequencies, and point biserial for each question on the exam.
- Condensed Item Analysis Report - includes a graphical display of response frequencies, as well as distractors for each question on the exam.
- Test Item Statistics Report - displays descriptive statistics for each question on the test, as well as point biserial and reliability calculations.

The following reports do not appear on the Exam Scoring Request Form, but can be requested in the “Special Instructions” field on Side 1 of the Exam Scoring Request Form: Comparative Grade Report, Item Analysis Graph Report, and Cross Tabulation Report. For more information, please see the “*Special Exam Data Reports*” section of this booklet.

## 3. Special Instructions:

If you have any special information or instructions for your exam, write them in this section. If you wish to pick up an electronically scored exam, need to be contacted via e-mail for a printed exam, or are requesting Special Exam Data Reports (see “*Special Exam Data Reports*” section of this guide), please note that here.

If you wish to exclude an item from scoring, you may indicate this in Special Instructions, or have the option to allow all student responses for that item to be marked as correct in the “Questions with more than 1 correct answer” option in the Enhanced Exam Options section on Side 2 of the request form.

## Side 2: Enhanced Exam Options:

If your exam has any of the following properties, you will need to complete the appropriate section on Side 2 of the Exam Scoring Request Form:

- Questions have values other than 1 point
- Extra Credit Questions
- Questions with more than one correct answer
- Learning Objectives
- Custom Grade Scale

### Questions with Values other than 1 Point:

Point values may be assigned to questions and/or learning objectives on your exam. Please write the question numbers (separated by a comma or a dash between a range of numbers) or learning objective under the “Questions/Learning Objectives” heading, and the point value for them under the “Point Value” heading in the corresponding row. Include the desired exam total point value in the “Total Point Value” box at the bottom. Any question or Learning Objective not listed in this section is assumed to have a value of 1 point.

### Extra Credit:

Any number of questions can be designated as extra credit. Indicate which items are to be considered extra credit. If extra credit items have values other than 1 point, indicate this in the “Questions with Values other than 1 Point” section of the request form.

### Questions with more than 1 correct answer:

There are two options when allowing more than one correct answer for a question:

- All correct answers must be chosen for response to be considered correct  
For example, if the correct answers are “A” and “C”, and the student responds with “A” and “B”, the question is marked as incorrect and no credit for the response is awarded.
- Any answer(s) chosen is correct  
This option is useful if there is more than one correct answer choice, and students are not required to select all correct answers. For example, if the correct answers are “A” and “C”, and the student responds with “A” and “B”, the question is marked as correct, and the student receives full credit for the item.  
This option is also useful when it is discovered that a question is misleading or incorrect after the exam has been administered to students. To use this option, bubble in all answer choices for that item on the answer key. All students will receive credit for that item.

### Learning Objectives/Subtests:

Under the “Learning Objective Title” heading, write the name of the learning objective as you would like it to appear on your reports. In the corresponding row, write the question numbers, separated by a comma (or dash between a range of numbers) under the “Questions” heading. If you have more than 5 learning objectives, please attach another sheet of paper to the form. If you wish for any Learning Objective to have a point values other than 1, please complete the “Questions with Values other than 1 Point” section on the Exam Scoring Request Form.

### Custom Grade Scale:

You may assign letter grades based on the percentage of items answered correctly. Write the minimum percentage correct next to each letter grade. You do not need to complete this section if you are using the default grade scale, which is:

90% correct = “A”; 80% correct = “B”; 70% correct = “C”; 60% correct = “D”; 59% or less correct = “F”



## Interpreting Exam Results

Once your exam has been scanned, you will receive either a printed set of results or an electronic copy that you will be able to access via a secure website.

There are three categories of reports:

- Student Exam Score Reports, which provide individual student scores in various formats.
- Analysis of Whole Exam Reports, which display data pertaining to the exam as a whole.
- Analysis of Exam Questions Reports, which display data pertaining to each question on the exam.

**Multiple Exam Forms/Versions:** If your exam has more than one version you will need to indicate this on the Exam Scoring Request Form. For more information, please see the “*Preparing Exams for Scanning*” and “*Completing the Exam Scoring Request Form*” sections of this booklet. Results for exams with multiple versions will be reported in the following manner:

Student Exam Score Reports: One report containing all students from all versions of the exam will be produced for any Student Exam Score report (Student Statistics, Student Response Matrix, Student Grade Report, Gradebook) that you choose to receive.

Analysis of Whole Exam Reports: One report containing data for the entire exam (including all versions of the exam) will be produced for most reports in this category. However, one report *for each version* of the exam will be produced for the Condensed Test Statistics & Item Analysis Report, due to the item analysis component of this report.

Analysis of Exam Questions Reports: Because data is calculated for each individual question, and questions differ in each exam version, reports must be created separately for each version of the exam. You will receive one report for each version of the exam.

If your exam contains Learning Objectives/Subtests, data for each learning objective will appear where it is relevant on each of the reports you have selected. You will not receive a separate set of reports for each learning objective. Learning objectives are not factored in any of the Analysis of Exam Questions Reports.

The following pages will explain each type of print and electronic results options available.






For more information regarding any reporting options, please call Testing and Evaluation at 217- 581-6696.

## Student Exam Score Reports:

### Student Statistics Report

The Student Statistics Report (also known as the “Alpha List”) provides the scores for all students in the class. If you submitted an “Exam Title” on the Exam Scoring Request Form, it will appear at the top of Page 1 of this report. If learning objectives are defined, separate tables will show the student information for the overall test and the learning objectives. An example of this report is at the bottom of this page. The following items are available on the Student Statistics Report:

- **Student:** Lists the student identified on the test in alphabetical order by last name. The contents of the first name field will also be listed. Each name appears exactly as it was blackened in on the scannable form. Students who fail to blacken their names will appear as blank lines at the top of the page.
- **Grade:** The student’s letter grade on the exam, based on the following scale:  
A = 90 – 100%; B = 80 – 89%; C = 70 – 79%; D = 60 – 69%; F = 0 – 59%  
If you wish to change the scale, indicate this on the Exam Scoring Request form. For more information on changing grade scales, see the “*Completing the Exam Scoring Request Form*” section of this document.
- **Total:** Displays the total score achieved by each student. The first number is the number of points the student received (number of questions answered correctly multiplied by their point value); the second number is the total number of possible points on the test.
- **Percent:** Displays the percent score achieved by each student (the number of correct points earned by each student divided by the total number of points the exam is worth), accompanied by a bar that indicates the percentage value.
- **Mean:** At the bottom of the table, a line will indicate the mean for the total number of points for the class, the mean for the number of correct responses, and the mean percent.

<b>Student Statistics Report</b>			
<b>Intro - Midterm</b>			
<b>Overall</b>			
Student	Grade	Total	Percent
COOPER B	B	44 / 50	88.00 
DRAPER D A	B	44 / 50	88.00 
PRYCE L	C	38 / 50	76.00 
STERLING R C	D	33 / 50	66.00 
<b>Mean</b>	C	39.75	79.50 

# Student Response Report

The Student Response Report provides visual insight to both student and question performance by displaying all test responses by student and by question in a matrix format. Students are listed down the left side of the report. Each question is listed across the top of the report. Each student's answer to each graded question is listed within a box: clear for correct responses, gray for incorrect responses, black for unanswered questions, and an asterisk (\*) for more than one response chosen when only one response is correct.

The following statistics are provided on the right end of the matrix: report total score, percent score, and grade.

At the bottom of the report the percentage of students who answered the question correctly is listed, as well as averages for the total score, percent score, and grade.

For more details, please see the Testing and Evaluation website, or call 217-581-6696.

Student Response Matrix																																						
Legend: Correct: <input type="checkbox"/> Incorrect: <input type="checkbox"/> Unanswered or Other Incorrect Response: <input checked="" type="checkbox"/>																																						
Students:	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6	Question 7	Question 8	Question 9	Question 10	Question 11	Question 12	Question 13	Question 14	Question 15	Question 16	Question 17	Question 18	Question 19	Question 20	Question 21	Question 22	Question 23	Question 24	Question 25	Question 26	Question 27	Question 28	Question 29	Question 30	Question 31	Question 32	Question 33	Question 34	Question 35	Total Score	Percent Score	Grade
<b>Answer Key:</b>	A	A	A	A	B	B	B	B	C	C	C	C	C	D	D	D	D	D	D	E	E	E	E	E	E	D	D	D	D	B	C	C	C	C	35	100.00	B	
COOPER	A	A	A	B	B	C	B	A	B	C	C	C	D	C	E	D	D	D	D	E	E	E	E	E	E	D	D	D	D	B	C	C	C	D	28	80.00	B	
DRAPER	A	A	A	A	B	B	B	B	C	C	C	C	C	D	D	D	D	D	E	E	E	E	E	E	D	D	D	D	B	C	C	C	C	35	100.00	A		
PRYCE	B	B	A	C	B	B	C	B	A	A	A	B	C	D	D	A	A	A	E	C	D	D	D	D	A	A	A	A	A	A	B	C	C	8	22.86	F		
STERLING	B	B	B	B	B	B	A	C	B	C	C	C	C	C	D	D	C	D	D	B	E	*	A	E	E	D	C	D	D	B	B	C	C	C	23	65.71	D	
<b>Percent Correct:</b>	50	50	75	50	25	100	50	75	25	75	75	75	75	75	75	75	75	75	75	50	75	75	50	100	5	50	75	75	75	50	75	75	75	75	23.50	67.14	D	

## Student Grade Report

The Student Grade Report provides a detailed grade report for each student who took the exam. Once printed, these reports may be given to your students. If you have chosen to receive reports electronically, each student report appears on its own page. If you are receiving your reports electronically and wish to have more than one student appear on a page, please indicate this in the “Special Instructions” section of the Exam Scoring Request Form.

The Student Grade Report requires many system resources in order to be produced. **Please request this report only if you intend to utilize it.** If you have requested electronic data, bear in mind that this report will take a while to print.


At the top of each student’s page is the student’s name (Last, First, and Middle Initial, when applicable), along with a table providing the student’s overall exam data, which includes:

- **Grade:** The student’s letter grade on the exam, based on the default grade scale, unless otherwise specified on the Exam Scoring Request Form. For more information on changing grade scales, see the “*Completing the Exam Scoring Request Form*” section of this document.
- **Total Score:** The total score achieved by the student. The first number is the number of points the student received (number of questions answered correctly multiplied by their point value); the second number is the total number of possible points on the test.
- **Score (%):** The corresponding percentage of the total score, accompanied by a bar that indicates the percentage value.

If you utilized multiple exam versions, the version of the exam the student bubbled on his or her scantron will appear in the top right of the page.

If learning objectives were defined, you will see scores for each learning objective (in addition to the overall test) in a table directly below the overall exam data.

Below the overall scores, all items will be displayed under the heading “Responses”. The question number, the response the student blackened on the scannable form, and the correct answer will be displayed.

Student Grade Report			
Student: DRAPER D			
Grade	Total Score	Score (%)	
Overall	B	44 / 50	88.00 
<b>Incorrect Responses</b>			
Question	Response	Correct Answer	
Question17	B	C	
Question20	C	B	
Question	Response	Correct Answer	
Question26	B	A	
Question29	D	C	
Question	Response	Correct Answer	
Question32	B	E	
Question38	B	E	

## Gradebook Reports

The Gradebook Report is an export of basic exam results information that can then be imported into other programs. Data for each student will appear in rows. If you are utilizing more than one test form, all students from all test versions will be listed in one file. The Gradebook Report can be produced in two different formats:

- D2L Format: a comma delimited (.csv) file for importing into Desire2Learn
- Excel (.xlsx) Format: for importing into a spreadsheet (or other compatible software), but cannot be imported into D2L.

### Gradebook Report for Desire2Learn (D2L)

The following data appears in the D2L formatted Gradebook Report:

- Student E-Number
- Student Raw Score/Number of items correct (if questions are worth more than 1 point, the total point value will be reflected in the raw score.)
- A header required for D2L import indicating the “Exam Title” (as specified on the Exam Scoring Request Form) and the Total Point Value of the exam.

	A	B	C	D
1	(OrgDefinedID	QUIZ 1 Points Grade<Numeric MaxPoints:15	End-of-Line Indicator	
2	E12058977		13 #	
3	E12128544		15 #	
4	E12115652		6 #	
5	E		11 #	
6	E12056425		11 #	
7	E12074745		8 #	
8	E12127679		0 #	
9	E12002731		12 #	
10	E12055833		10 #	
11	E12088500		13 #	
12	E12331231		9 #	

### Gradebook Report in Excel file format

The following data appears in the Gradebook Report Excel (.xlsx) format. Data is sorted in alphabetical order by student last name:

- Student Last Name
- Student First Initial
- Student Middle Initial
- Enumber (if included on test form)
- Letter Grade
- Percentage Correct
- Raw Score

	A	B	C	D	E	F
1	AUSTERO	L		D	63.16	12
2	HOLT	S		F	57.89	11
3	MAHARIS	G		D	63.16	12
4	PARMESEAN	G		D	63.16	12
5	SANCHEZ	K		F	52.63	10
6	VEAL	A		F	36.84	7
7	WEATHERMAN	J	W	F	31.58	6
8	WEATHERS	C		F	57.89	11
9	ZUCKERKORN	B		F	47.37	9

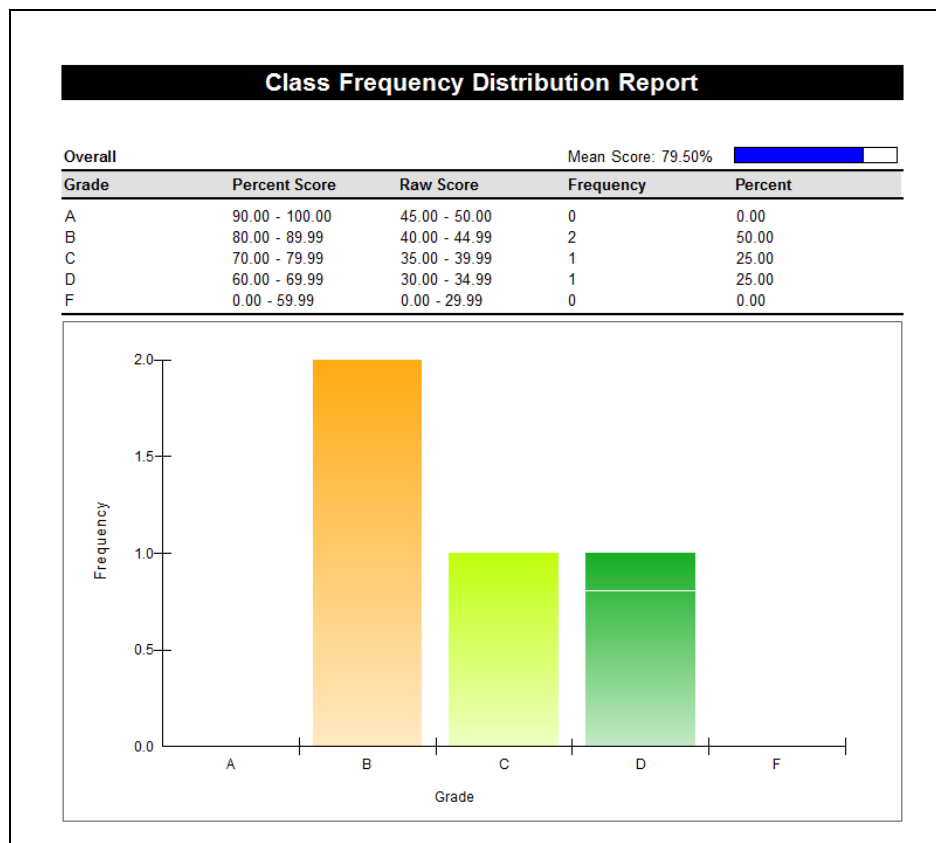
## Analysis of Whole Exam Reports:

### Class Frequency Distribution Report

The Class Frequency Distribution Report is a graphical display of the frequency of scores for an entire class. The mean percent correct score is displayed at the top of the report. If you have more than one version of the exam, all scores from each version will be combined in one report. If you have defined learning objectives, the frequency of scores will be displayed in separate graphs for each objective, along with a graph for the overall scores.

The table across the top of the report shows grades, percent score value range for each grade, raw score value range for each grade, the frequency of each grade, and percentage of students who received that grade. The graph shows the score across the X axis (bottom) and the frequency of that score along the Y axis (left side).

Letter grades displayed are based on the default grade scale, as indicated in the “Percent Score” column. If you wish to change the scale, indicate this on the Exam Scoring Request form. For more information on changing grade scales, see the “*Completing the Exam Scoring Request Form*” section of this document.



## Test Statistics Report

The Test Statistics Report displays descriptive statistics about the overall test. If you have defined learning objectives in your exam, each objective's data will appear in a column to the right of the overall exam data. The following statistics are displayed:

### Score Data:

**Number of Graded Items:** The number of questions on the test key that were scanned.

**Total Points Possible:** The point value of the exam.

**Maximum Score:** The highest raw student score.

**Minimum Score:** The lowest raw student score.

### Statistics:

**Mean Score:** The average of all student raw scores.

**Mean Percent Score:** The average of all student percent correct scores.

**Range of Scores:** The number of points between the maximum and minimum scores.

**Standard Deviation:** The square root of variance (see below).

**Variance:** A measure of the dispersion of a set of data from its mean. The higher the variance, more dispersed the scores are.

### Percentiles:

**Percentile 25:** The percent of student scores that fall below 25% of the Range of Scores.

**Median Score:** The midpoint in the range of student scores.

**Percentile 75:** The percent of student scores that are above 75% of the Range of Scores.

**Inter Quartile Range:** The difference between the 75<sup>th</sup> percentile and the 25<sup>th</sup> percentile.

### Confidence Intervals:

**Confidence Interval (1, 5, 95 and 99%):** An estimated range of score values that estimates with 1%, 5%, 95%, and 99% confidence how likely the range would be repeated. Higher confidence interval percentages indicate a greater level of certainty.

### Test Reliability:

**Kuder-Richardson Formula 20 and Kuder-Richardson Formula 21:** Each measures test reliability and overall internal consistency. A higher value indicates a stronger relationship between items on the test.

**Coefficient (Cronbach) Alpha:** A coefficient that describes how well a group of items focuses on a single idea or construct.

Test Statistics Report	
Overall	
<b>Score Data</b>	
Number of Graded Items	50
Total Points Possible	50
Maximum Score	44
Minimum Score	33
<b>Statistics</b>	
Mean Score	39.75
Mean Percent Score	79.50
Benchmark Score	-
Range of Scores	11.00
Standard Deviation	4.60
Variance	21.19
<b>Percentiles</b>	
Percentile (25)	35.50
Median Score	41.00
Percentile (75)	44.00
Inter Quartile Range	8.50
<b>Confidence Intervals</b>	
1%	26.31
5%	32.43
95%	47.07
99%	53.19
<b>Test Reliability</b>	
Kuder-Richardson Formula 20	0.77
Kuder-Richardson Formula 21	0.63
Coefficient (Cronbach) Alpha	0.77

## Condensed Test Statistics and Item Analysis

The Condensed Test Statistics and Item Analysis Report provides a summary of basic exam statistics, as well as basic analysis of individual questions on the exam. When using multiple versions of an exam, you will receive one report for each exam version.

The top portion of the report contains statistical information about the test results as a whole. The body of the report shows analysis of each question. Statistics that appear on the Condensed Test Statistics and Item Analysis Report include:

### Test Statistics

**Total Possible Points** – The point value of the exam.

**Total Students** – The number of Scantron sheets scored, minus the key.

**Standard Deviation:** A measure of the dispersion of a set of data from its mean. The higher the deviation, more dispersed the scores are.

**Median Score** – The midpoint in the range of student scores.

**Mean Score** – The average of all student scores.

**Reliability Coefficient (KR20)** - Measures test reliability and overall internal consistency. A higher value indicates a stronger relationship between items on the test.

**Maximum Score** – The highest raw student score.

**Minimum Score** – The lowest raw student score.

**Range of Scores** – The difference between the maximum and minimum scores.

### Item Analysis

**Response Frequencies** – The number of students who selected each response choice.

**Distractor** – Incorrect answers chosen by students. A distractor chosen more than the correct answer will appear in gray font.

**Correct Group Responses** - The “Total %” column displays the percentage of students who answered the question correctly. The “Upper 27%” column displays the percent of students who scored in the upper 27% of the exam that answered the individual question correctly. The “Lower 27%” column displays the percent of students who scored in the lower 27% of the exam that answered the individual question correctly.

**Point Biserial** - A measurement of discrimination, indicating the relationship between a response for a question and the overall test score of the respondent. Values range between -1 and +1, with 0 being the midpoint.

Condensed Test Statistics and Item Analysis Report																	
<b>Legend:</b> Distractors Chosen More than Correct Answer: ■																	
<b>Total Possible Points:</b>			43			<b>Median Score:</b>			37			<b>Maximum Score:</b>			42		
<b>Total Students:</b>			12			<b>Mean Score:</b>			36.75			<b>Minimum Score:</b>			30		
<b>Standard Deviation:</b>			3.17			<b>Reliability Coefficient (KR20):</b>			0.61			<b>Range of Scores:</b>			12		
Question Number	No.	Correct Answer	Response Frequencies					Correct Group Responses			Point Biserial						
			A	B	C	D	E	Total %	Upper 27%	Lower 27%							
1		D	0	2	0	10	0	83.33	100.00	66.67	0.46						
2		D	0	0	0	12	0	100.00	100.00	100.00	-						
3		A	12	0	0	0	0	100.00	100.00	100.00	-						
4		B	0	12	0	0	0	100.00	100.00	100.00	-						
5		A	2	10	0	0	0	100.00	100.00	100.00	-						
6		A	11	1	0	0	0	91.67	100.00	66.67	0.64						
7		A	11	1	0	0	0	91.67	100.00	100.00	0.07						

Correct answers display in bold  
Distractors display in gray font



## Analysis of Exam Questions Reports:

### Item Analysis Reports

There are two Item Analysis Reports:

- Detailed Item Analysis
- Condensed Item Analysis

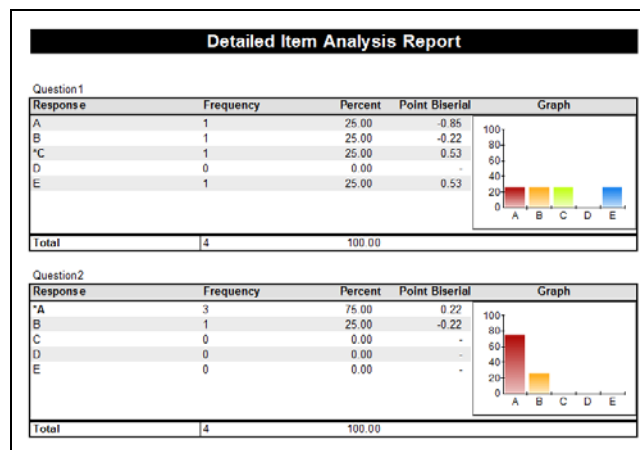
Item Analysis Reports display statistics for each question in a separate table. The question number is at the top of each table, and answer choices are displayed in a “Response” column with correct answers bolded, italicized, and preceded by an asterisk (\*). Both reports provide the following statistics:

- **Frequency:** The number of times an answer choice was chosen by students.
- **Percent:** The corresponding percentage of the frequency.

Each report, however, does provide additional data, which is detailed below. When using multiple versions of an exam, you will receive one report for each exam version.

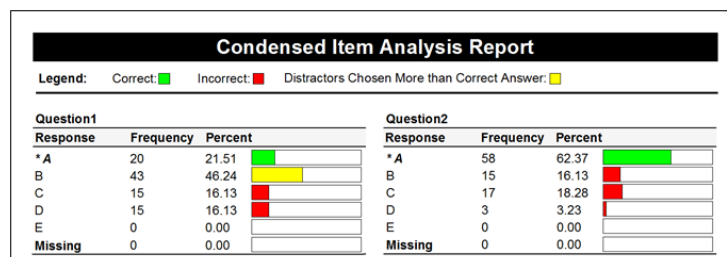
### Detailed Item Analysis Report

In addition to Frequency and Percent calculations, Detailed Item Analysis includes a graphical layout of response frequencies, as well as the total number of responses for each question. Point Biserial, a measurement of discrimination indicating the relationship between a response for a question and the overall test score of the respondent is also calculated. Values range between -1 and +1, with 0 being the midpoint.



### Condensed Item Analysis Report

In addition to Frequency and Percent calculations, Condensed Item Analysis includes a bar chart indicating Response Frequency/Percent and Distractors. Distractors are responses that are not the correct answer. When a distractor is chosen more often than the correct answer, the percentage bar chart will display that response choice in yellow.



## Test Item Statistics Report

The Test Item Statistics Report is similar to Item Analysis Reports in that it provides data for each item/question on your exam. When using multiple versions of an exam, you will receive one report for each exam version.

This Test Item Statistics Report displays the following descriptive statistics for each question on the test:

- **Question:** Displays the question number.
- **Points:** Displays the point value assigned to the question.
- **Graded:** Displays the number examinees that answered this question.
- **Correct:** Displays the number of students that answered the question correctly.
- **Incorrect:** Displays the number of students that answered the question incorrectly.
- **No Response:** Displays the number of students who left the question unanswered (blank).
- **Point Biserial:** A measurement of discrimination, indicating the relationship between a response for a question and the overall test score of the respondent. Values range between -1 and +1, with 0 being the midpoint.
- **Percent Correct:** The corresponding percentage of the number of students who answered the question correctly

Test Item Statistics Report								
Question		Summary Statistics				Reliability		
Question	Points	Graded	Correct	Incorrect	No Response	Point Biserial	Percent Correct	
Question1	1	4	1	3	0	0.53	25.00	
Question2	1	4	3	1	0	0.22	75.00	
Question3	1	4	4	0	0	-	100.00	
Question4	1	4	3	1	0	0.85	75.00	
Question5	1	4	4	0	0	-	100.00	
Question6	1	4	2	2	0	0.27	50.00	
Question7	1	4	2	2	0	0.27	50.00	
Question8	1	4	4	0	0	-	100.00	
Question9	1	4	4	0	0	-	100.00	
Question10	1	4	3	1	0	0.85	75.00	
Question11	1	4	4	0	0	-	100.00	
Question12	1	4	1	3	0	0.53	25.00	
Question13	1	4	4	0	0	-	100.00	
Question14	1	4	4	0	0	-	100.00	
Question15	1	4	1	3	0	0.53	25.00	

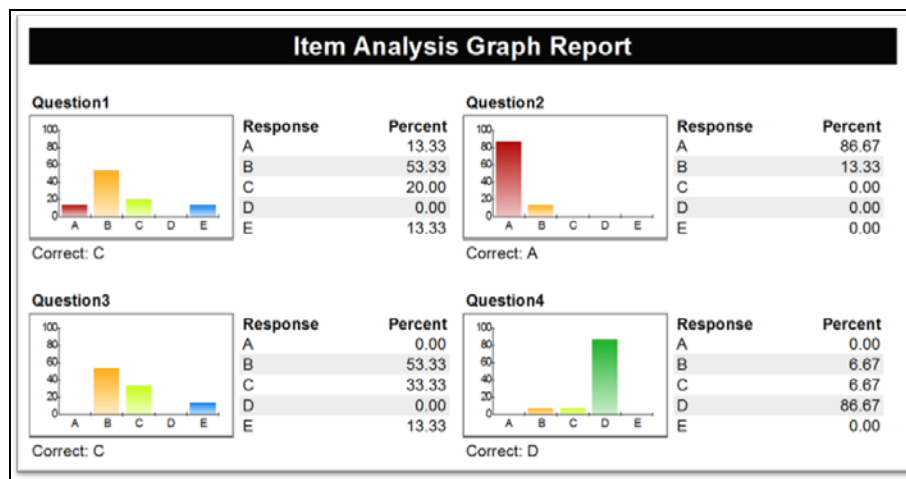
## Special Exam Data Reports

There are several exam reports that are not commonly utilized with typical exams, and are available upon request. To request any of these reports, please write it in the “Special Instructions” section of the Exam Scoring Request Form. For more details, please call Testing and Evaluation at 217-581-5986.

The **Comparative Grade Report** allows you to see test scores broken down by test form or contents of the “Special Code” grid on the exam form. When requesting this report, please indicate which field the report needs to evaluate.

Comparative Grade Report				
Groups: Test Form				
	Students	Grade	Percent	
Overall	4	B	87.08	<div style="width: 87.08%; height: 10px; background-color: blue;"></div>
Test Form				
A	2	B	80.83	<div style="width: 80.83%; height: 10px; background-color: blue;"></div>
B	2	A	93.33	<div style="width: 93.33%; height: 10px; background-color: blue;"></div>

The **Item Analysis Graph Report** is a simple display of item analysis for each question in an exam in bar graph format.



The **Cross Tabulation Report** generates a table that displays students’ responses to two or more exam questions. When requesting this report, be sure to indicate which items you wish to have cross-tabulated.

Crosstabulation Report						
Crosstabulation: Question1 * Question3						
	A	B	* C	D	E	Total
A			7%		7%	13%
B		40%	7%		7%	53%
* C		7%	13%			20%
D						
E			7%			13%
Total		53%	33%		13%	100%

## Exam Scoring Request Form

Instructor Name: \_\_\_\_\_ Department: \_\_\_\_\_ Phone: \_\_\_\_\_  
Best Contact Number

Exam Title: \_\_\_\_\_ Course/Section: \_\_\_\_\_

Exam utilizes multiple versions/test forms. If checked, please indicate # of Exam Keys: \_\_\_\_\_  
Score multiple versions/test forms (please, choose if applicable):  Separate  Combine

### How would you like to obtain your results and be contacted when scoring is finished? (select one)

- Reports uploaded and link e-mailed to your EIU e-mail address: \_\_\_\_\_  
- Scanned forms will be sent back to you via campus mail, unless you specify otherwise in special instructions.
- Reports printed at Testing Office. We will contact you to pick up your exam. Phone #: \_\_\_\_\_  
- Please designate who may pick up **printed reports or exam forms**:  Instructor  Dept Rep/Other: \_\_\_\_\_

### Reporting Options - \*See page 2 for enhanced exam options

#### Student Exam Scores:

- #101 Student Statistics (Alpha-list) Report (containing student raw score, percentage score, letter grade)
- #105 Student Response Report (matrix list of students & their responses, raw score, % score, letter grade, basic item analysis)
- #150 Student Grade Report (individual student grade reports, student incorrect responses w/correct key answers)
- Gradebook Report for Desire2Learn (D2L) (Importable Student Scores - **Student E-numbers are required**)
- Gradebook Report in Excel file format (Importable Student Scores)

#### Analysis of Whole Exam:

- #103 Class Frequency Distribution Report (includes mean score and graphical display of distribution)
- #310 Test Statistics Report (includes mean score, standard deviation, percentiles, and test reliability data)
- #206 Condensed Test Report (includes mean/median, standard deviation, response frequencies, item analysis)
- #100 Test Analysis Report (overview of test data that may require additional attention)

#### Analysis of Exam Questions:

- #201 Detailed Item Analysis Report (includes graphical representation of response frequencies, and point biserial)
- #204 Condensed Item Analysis Report (includes graphical representation of response frequencies, and distractors)
- #320 Test Item Statistics Report (statistical data related to each test questions - includes reliability statistics)

#### Special Instructions:

#### For Office Use Only

Date/Time Received: \_\_\_\_\_ by: \_\_\_\_\_ Date/Time Completed: \_\_\_\_\_ by: \_\_\_\_\_  
Date/Time Contacted: \_\_\_\_\_ by: \_\_\_\_\_ Date/Time-Picked Up/Mailed: \_\_\_\_\_ by: \_\_\_\_\_

Picked up by (Instructor/Dept. Rep signature): \_\_\_\_\_

### \*Enhanced Exam Options:

Please complete corresponding item(s) below if your exam contains any of the following:

- Questions with values other than 1 point
  - Extra Credit items
  - Questions with more than 1 correct answer
  - Learning Objectives
  - A Custom Grade Scale
- Default grade scale: 90% = A; 80% = B, etc.

#### Questions with Values other than 1 Point

Please indicate which questions have point values other than 1, and their point value(s) below:

Question #'s	Point Value	
<b>Total Point Value:</b>		

#### Extra Credit

Please indicate which questions are to be scored as extra credit and indicate their point value(s) below:

Question #'s	Point Value	
<b>Total Point Value:</b>		

#### Questions with more than 1 correct answer:

Please write which items have more than one correct answer **and** indicate how item(s) is to be scored below:

Question(s): \_\_\_\_\_

- All correct answers must be chosen for response to be considered correct  
- Select this option if all selected answers **must be chosen** in order for the question to be considered correct.
- Any answer(s) chosen is correct  
- Select this option if every answer **does not have to be chosen** in order for the question to be correct.  
- Select this option if you wish for all examinees to receive credit for a question, then, on the test key, bubble in all answer options for that question.

#### Learning Objectives/Subtests

Write the title of the learning objective/subtest as you would like it to appear on your reports. In the corresponding row, write the question numbers, separated by a comma. If you have more than 5 learning objectives, please attach another sheet of paper.

Learning Objective Title	Question #'s
1.	
2.	
3.	
4.	
5.	

#### Grade Scale Values

If exam grade scale is not the default (A = 90%, B = 80%, etc.), please write the desired **minimum percentage value** for each letter grade indicated below (for example, A = 93%, B = 86%, etc).

A = \_\_\_\_\_%; B = \_\_\_\_\_%; C = \_\_\_\_\_%; D = \_\_\_\_\_%