This guide covers the use of Scantron Forms for test sheets.

SCANTRON (PARSCORE) TEST SERVICES

Scantron (Parscore) test scanning services are available for all SU faculty and staff from ITS in the Imaging and Data Processing Center in Conway Hall (TETC) 113. A work order or service request is not required to take advantage of this service. The test(s) should be put in a campus inter-departmental mail envelope and clearly labeled with only the instructor's name and department on the outside. Tests can be dropped off and picked up in Conway Hall (TETC) 113. If tests from more than one section are submitted, please label each class section and separate with paper clips. Only faculty members can pick up tests. If someone else is sent to pick up a test, they must have a written note from the appropriate faculty member or a phone call from the faculty member to x84168 or x36103.

Normal working hours are Monday through Friday between 8:00 a.m. and 5:00 p.m. (Summer and Winter sessions 8:00 a.m. and 4:30 p.m.). Normally, you can expect your test to be completed within two (2) hours during normal working hours. Any tests that are left outside these hours will not be completed until the next normal day shift. Outside of the I.D.P. Center office area, there is an Exam drop off box if you would like to drop off your exam after hours. Picking up exams must be done during normal office hours.

SCANTRON REQUIREMENTS

GENERAL (FACULTY & STUDENTS) FOR SCANTRON FORMS

- Use only soft (no. 2) pencils for all marks.
- Do not fold or put staples in the test sheets.
- All answers should fill the block completely.
- Any erasures must be completely erased.
- Do not put any marks between the black marks (timing marks) on the left side of the test sheet.
- Do not put any marks above the first set of timing lines (top ¼") on form F-289.
- Questions will be marked wrong when a student leaves a question unanswered (blank).
- The test scoring machine does not place any marks on the answer sheets.

ADDITIONAL STUDENTS REQUIREMENTS

- MUST mark the ID number (EMPLID) accurately and completely, and name on form F-1712.
    - The system will not grade a test sheet without the EMPLID filled in. Please use the first seven (7) spaces in the EMPLID area and leave the rest blank. If it is the first test, or the student's name cannot be found in the existing roster, then the form will be rejected and not graded. The name must be filled out on the F-1712 form - Last, First, Middle Initial with at least one space between each part of their name (Hyphenated or 2-part last names should be entered together on the form as one name).
- The TEST FORM block is ignored if only one version (A) of the test is given.
    - However, if more than one version is being given, then the student TEST FORM block MUST be filled in according to the test version being taken. The different student test forms (A, B, C, D) can be co-mingled when submitted for scanning, but it is better to keep like forms together, because some students will forget to mark it. Remember, if only one version of the test is given, then students don't need to mark the TEST FORM block.
- All other items optional (Best left blank).
    - If the EXAM NUMBER block is filled in, it will show up on the "Class Response Report". The EXAM NUMBER block can be used in conjunction with the Key to grade Essay Points. The Exam Number bubbles should always be left blank.

** NOTE: Faculty may want to check students' score sheets before bringing over for grading to ensure completeness and accuracy. Most important to check for would be the presence of an EMPLID in the Student ID block. If the student ID number is not given, and we cannot locate the student in the roster, then that score sheet cannot be graded.

FACULTY: ANSWER KEY REQUIREMENTS

- Identified as the key (KEY) and placed on top of the students' tests.
  - The TEST FORM block (A, B, C, D) is used to identify the key as such. Up to four (4) versions of a test can be given, each with its own key. If you are only giving one version of the test, the TEST FORM block on the key MUST be marked as "A." If multiple versions are being given, mark each key with a unique TEST FORM field for each version. (E.g., two versions - mark 2 keys - A and B). If more than one key is being used, be sure each one has the same number of questions and point ranges.
- Instructor's last name. (E.g., SMITH)
  - If more than one instructor is teaching the class, please list all names. If it is a Biology course taught by more than one instructor, then the I.D.P Operator will set up the course with separate rosters for lab sections and separate rosters for lecture sections. This will allow all instructors to work totally independent of each other. The only exception to this is if ONE instructor teaches the lecture and ALL associated lab sections for that lecture. In this case one roster can be set up, but all lab section tests must be brought over together to be graded.
- The FULL class code. (E.g., HIST 101-001)
  - This is the class code as obtained from the Registrar's published Final Academic Schedule, including 4-letter DEPT code, 3-digit COURSE number, and 3-digit SECTION number. Classes are organized by this class code, so all information is required to create the roster even if only one section of a given course is being offered. Also, please be sure the section number is correct for the current term.
- The test type and occurrence. (E.g., EXAM 3)
  - This is needed so that we can grade the test in the appropriate roster column. It should be taken directly from the categories listed for the first test and hand-written on the key. Do NOT mark the exam number in the 3-digit EXAM NUMBER block on the answer key. Anything entered here will be interpreted as additional possible points to be added to the total, and the test results will be incorrect. (See *Essay Points* under Optional Features for a full explanation).
- Additional information required for the FIRST test only:
  - MUST use form F-1712 in order to enter students' names in the roster.
  - **MUST** include a list of the **types and number of tests** for the semester.
  - Please include the day(s) & start time on the first test.
    (E.g., MWF 11:00 -or- TR 5:30)
  - You do not have to put an ID number or any "enrollment" information (F-1712 only) on the **key**.

SCANTRON PROCEDURE

DESCRIPTION

IT is using ParSCORE scanning software which incorporates grade book processing. Grade book processing allows a roster to be created for each of your classes, which can be designed to accommodate the type and number of tests you plan to give. The students' ID numbers and names are entered during the creation of the roster at the beginning of the school semester when scoring the first test.

Student data will be entered by the students on a special STUDENT ENROLLMENT FORM used when giving the first test of the semester. In order to set up the roster to suit your individual needs, we will need to know what type and how many tests you plan to give during the semester. You may find that a copy of the course syllabus is helpful in determining these grade categories. The roster can hold up to ten (10) different test types and each should be abbreviated to four (4) letters. These will be listed on the roster in the order given. **Please list this information on the back of your KEY (in the "Mini Blue Book" section of the Student Enrollment Form).** We also have an "I.D.P. Center Exam Requirements form that you can fill out before leaving your exam with us to be graded. Please see one of our operators for that form.

For example:

- 4 EXAM - or - 1 MIDT
- 1 FINL
- 14 QUIZ

** NOTE: If no test types are specified, then rosters will be set up with five (5) exams or I.D.P. Operator's choice.

POINT VALUES

By default, questions will be graded as 1 point each (Raw Score). If you would like to grade the test with anything other than 1 point each, please specify that by writing how many points each you want per question on the key. **Tests can only be graded one way or the other, not both.** The Score Distribution Report gives a conversion of raw score to percentage score when grading at 1 point each. (See QUESTION WEIGHTING under Optional Features for more information). **Also, please leave a note specifying the total number of questions when questions in the middle of the test key are left blank.** If you purposely left a question blank, please let us know so that we can make the proper adjustments to get your total possible points correct for your exam.

When scoring, tests **MUST** be separated by section in order to place scores in the proper roster.

FORMS

Blank Scantron test forms must be ordered from Central Stores and are available in lots of 100. Two (2) forms are available for testing purposes, each scoring up to 200 questions:

- STUDENT ENROLLMENT FORM (Form **F-1712**) SU # **250-99-05**
    - This form must be used for the **first** test that is given for the semester and includes mark-sense bubbles for students to enter their names and EMPLIDs into the roster.
- STUDENT TEST FORM (Form **F-289**) SU # **250-99-04**
    - This form is used for all subsequent tests for the remainder of the semester.

SCANTRON OUTPUT

All reports (except the Class Response Report and the Error Log) have statistical summary information in the upper right corner. This information includes:

- Total Possible Points
- Students in this Group
- Mean Score
- Median Score
- Standard Deviation
- Highest Score
- Lowest Score
- Reliability Coefficient (KR20) ($-1 < KR20 < +1$)

ITEM ANALYSIS

This report is a fundamental tool for assessing the effectiveness, reliability, and validity of a particular test item or test. For each test item (question), this report will list:

- Percentage of the TOTAL class that answered the question correctly.
- Acceptable range: True-False items: 65-85%
- Multiple Choice items: 50-70%
- Percentage of the TOP 27% of the class that answered the question correctly.
- Percentage of the BOTTOM 27% of the class that answered the question correctly.

Discrimination (Point Biserial Correlation Coefficient) -- This attempts to measure how well an item distinguishes between the better students and the poorer students. Generally, the higher the coefficient, the better the discrimination, and thus the better the item. For classroom achievement tests, the following criteria may be used:

- .30 and above Very good items
- .20 to .29 Reasonably good but subject to improvement
- .09 to .19 Marginal items, usually need improvement
- below .09 Poor, to be rejected or improved
- (negative value) More students in lower portion of class responding correctly than in upper portion

Response frequencies -- The number of responses to each possible answer (A, B, C, D, E, 0). A zero means no response, that the item was omitted. **An asterisk (*) denotes the correct response as marked on the key.** (If there are multiple correct answers ("OR"), they will be marked with a pound symbol (#)).

Non-distractors -- This is defined to be an answer that no one in the entire group selected.

SCORE DISTRIBUTION

This report will list the class grades in descending order with a **conversion of raw score to percentage score.**

CLASS RESPONSE REPORT

This report provides a printout of the test responses of each student. A Class Response Report is generated for each form of the test (A, B, C, D), if multiple versions are given.

The first line is the key to the test in rows of 50 questions (1-50, 51-100, etc.), broken into groups of ten (10).

The following lines are the student responses, listed in ID order:

- Correct responses are recorded by a hyphen (-),
- Incorrect responses are printed with the letter of the incorrect response,
- A blank indicates an omitted answer,
- An asterisk (*) indicates incorrect multiple marks.

Anything the student has entered in the EXAM NUMBER field is also listed here.

ERROR LOG

This report is generated for each batch of score sheets processed. It includes a listing of all the errors (multiple/omitted marks) encountered in scanning the score sheets, whether they were corrected during the scanning process or not. You may want to check the student responses on the Class Response Report for any asterisks (*) or blanks, which represent legitimate multiple and/or omitted responses that were not corrected at scan time. The errors on the Error Log are listed in the order as sent through the

scanner. If the answer key requires multiple marks for certain responses ("AND"), then an error will be generated for students not marking the appropriate number of marks.

ROSTER REPORT

This is the class roster. It will list all students in alphabetical order, with all grades (from Scantron graded tests) listed on the roster. It is from this report that individual student grades can be obtained.

SCANTRON OPTIONAL FEATURES

MAKE-UPS

Do not mix up the types of test forms! If the make-up exam(s) were taken from the same key as the original class, and no other tests have been taken since then, then all that is needed is the students' make-up exam(s). They can be added to the current test data, and new reports can be generated.

Alternatively, any student that misses or makes up a test can have that test hand-graded by the instructor, and then have the score sent over to IT with the next test to be manually entered into the roster.

MULTIPLE ANSWERS

Multiple answers can be specified for a given question. Mark the KEY with all possible answers. If the key has multiple marks for any question(s), then one of two possible options must be specified:

- **AND** - ALL responses must be marked to receive credit
- **OR** - ONE (and only ONE) of the responses must be marked to receive credit.

If multiple marks are found on the key and neither option is specified, then **OR** will be assumed. All questions with multiple marks will be treated in the same manner.

QUESTION WEIGHTING

By default, all questions are weighted equally such that the total number of points is 100. If you want all questions weighted at a specific point value, please specify that on the key. If you want certain sections of the test to be weighted differently (E.g., T-F & MC sections), then specify the range of questions and the point values associated with each range.

For example:

- Questions 1-15 2 pts. each 30 points
- 16-25 3 pts. each 30 pts.
- 26-65 1 pt. each <u>40 pts.</u>
- 100 points total

EMAIL RESULTS

If you would like your class roster (only) e-mailed to your SU e-mail account, we can do so with a signed permission form from you. Please see the I.D.P. Center for this form. Your roster will come via e-mail to you in an Excel format, which can be pulled into My Classes.

ESSAY POINTS

Essay points can be included in the calculation of test scores. First, administer the test as usual, making sure the students do NOT mark the EXAM NUMBER block. Then, before bringing the Scantron sheets to IT, grade the essays for each student. Mark the total possible essay points in the EXAM NUMBER block on the key, and then mark the number of essay points each student got correct in the EXAM NUMBER block on that student's answer sheet. The points will automatically be scored and totaled when the Scantron sheets are graded.

For example: Suppose there are 75 objective and 25 essay questions on the test. You would fill out the key with "025" marked in the EXAM NUMBER block, and the correct value of "000" thru "025" marked in each student's EXAM NUMBER block.

Note: Please write "**Essay Points**" near the EXAM NUMBER block (or leave some kind of note) to let us know your intentions. Otherwise, we will assume it is a default test and erase the points in the EXAM NUMBER block on the key.

For other available scoring or reporting options, please call the Imaging and Data Processing Center at #84168 or #36103.