**Oregon Institute of Technology**
**Medical Imaging Technology Department**
**Radiologic Science Program Assessment**
**2007-2008**

## I. Introduction

The Radiologic Science program at Oregon Institute of Technology is entering its 56th year of educating future Radiologic Technologists. The program is proud of its strong retention rates from the sophomore (professional courses) to the senior year (externship). Because of limited space and teacher ratio, the radiology program limits the selection numbers to 50 students into the sophomore professional level each year. The program generally graduates between 44-48 students a year. The average salaries reported for the 2006 graduating class was $45,199.

## II. Summary of Program Purpose, Objectives and Student Learning Outcomes

The Radiologic Science faculty met during a summer 2007 retreat and developed the learning outcomes for the Radiologic Science program following the American Registry of Radiologic Technologists (ARRT) guidelines for a Bachelor of Science degree. The ARRT is a competency based certifying organization. The final version of our purpose, objectives and outcomes are listed below.

### Program Purpose

The purpose of the Radiologic Science Bachelor's Degree Program at Oregon Institute of Technology is to provide graduates with the knowledge, clinical skills, and compassion that will allow them to become exemplary medical imaging technologists and future leaders in radiology and advanced imaging professions.

### Educational Objectives

The Radiologic Science program prepares graduates to:

- Be advanced leaders in the profession.
- Be compassionate, caring healthcare professionals.
- Be eligible, well-prepared, and able to sit for and pass the ARRT credentialing examination.
- Have immediate job placement within six months of graduation.
- Address the healthcare shortage of Oregon and bordering states.
- Work in advanced imaging fields and sit for advanced imaging registries.

## Expected Student Learning Outcomes

The Radiologic Science student will:

1. Demonstrate knowledge of x-ray physics and related math.
2. Demonstrate professional conduct and ideals essential to the profession including teamwork, ethics.
3. Demonstrate effective critical thinking and problem solving skills.
4. Demonstrate effective patient care skills.
5. Utilize both written and oral communication effectively.
6. Recognize quality diagnostic images for both technical and anatomical criteria and have the technical ability to correctly repeat images when the quality is not adequate for diagnostics.
7. Demonstrate radiation safety for self, staff, and patients as set forth by the ALARA standards.
8. Perform imaging procedures using departmental protocol complying with ARRT curriculum standards.
9. Demonstrate an understanding of advanced multiple ARRT imaging modalities and the need for lifelong learning.

## Additional Student Learning Opportunities

RDSC students have additional learning opportunities through participation in Association of Collegiate Educators in Radiologic Technology (ACERT) conferences held in Las Vegas each year and attendance to the Oregon Society of Radiologic Technologists conference. The Radiologic Science student club participates in a joint venture with the Federal Fish and Wildlife Services of Klamath Falls, to identify fish species through digital imaging of the fish.

**III. Three-Year Cycle for Assessment of Student Learning Outcomes**

Table 1 below represents the outcomes that the Radiologic Science program will be measuring from 2007 through 2010. The outcomes were derived by the Radiologic Science faculty and based on areas of imaging that have the most impact on the overall care of patients and the quality of imaging exams in the various imaging departments. It is our intent to measure the level of professionalism of each student who successfully completes each level of imaging up to graduation.

| **Radiologic Science Outcome Assessment** | **2007 2008** | **2008 2009** | **2009 2010** |
|---|---|---|---|
| 1. Demonstrate knowledge of x-ray physics and related math. | | | |
| 2. Demonstrate professional conduct and ideals essential to the profession including teamwork, ethics | | | |
| 3. Demonstrate effective critical thinking and problem solving skills | Winter | | |
| 4. Demonstrate effective patient care skills | Fall | | |
| 5. Utilize both written and oral communication effectively | | | |
| 6. Recognize quality diagnostic images for both technical and anatomical criteria and have the technical ability to correctly repeat images when the quality is not adequate for diagnostics | | | |
| 7. Demonstrate radiation safety for self, staff, and patients as set forth by the ALARA standard | Spring | | |
| 8. Perform imaging procedures using departmental protocol complying with ARRT curriculum standards | | | |
| 9. Demonstrate an understanding of advanced multiple ARRT imaging modalities and the need for lifelong learning | | | |

Table 1. Three year cycle for assessment of student learning outcomes.

## IV. Summary of 2007-08 Assessment Activities

Radiologic Science faculty conducted formal assessment of three student learning outcomes during the year as described below.

### Student Learning Outcome #3: Demonstrate effective critical thinking and problem solving skills

The faculty conducted an analysis of where this outcome is reflected in the curriculum. The mapping of this outcome to Radiologic Science courses can be found in Appendix A, Student Learning Outcome-Course Matrix, table A-1.

The program faculty used a rubric selected by the institution to study critical thinking and applied it to a situational judgment exercise. The performance criteria were: the ability to identify the issue or problem, ability to identify multiple contexts and stakeholders, ability to identify and evaluate assumptions, ability to identify and evaluate evidence, and ability to draw implications and conclusions.

The faculty, after evaluating the results, felt that this piece of assessment was flawed and the results should not be used. We concluded that the rubric was not a good fit for this exercise, that the students could not clearly identify how to address this exercise, and because the exercise was in a two-part scenario, the faculty had confusion on how to score the results, which resulted in inconsistencies with the scoring.

The faculty decided that for future assessment of critical thinking we will redesign the exercise and rubric to be a better fit.

### Student Learning Outcome #4: Demonstrate effective patient care skills

The faculty conducted an analysis of where this outcome is reflected in the curriculum. The mapping of this outcome to Radiologic Science courses can be found in Appendix A, Student Learning Outcome-Course Matrix, table A-2.

### Assessment #1 (Direct)

To assess patient care skills, the faculty administered practical positioning exams to 48 junior students in RDSC 301 Radiographic Positioning in fall 2007. The faculty directly observed and scored mock Radiologic patient card procedures performed by students on simulated patients. Table 2 on the next page shows the performance criteria and results for this assessment.

| Performance Criteria | Assessment Methods | Measurement Scale | Minimum Acceptable Performance | Results |
|---|---|---|---|---|
| Patient History | Final Practical Exam | Scale of 1-5 out of 5 possible categories | 90% of the students should score 5 | 100% |
| Patient Preparation And Communication | Final Practical Exam | Scale of 1-5 out of 5 possible categories | 90% of the students should score 5 | 98% |
| Select Correct Technical Factors | Final Practical Exam | 0 = Satisfactory<br>-5 = One Error<br>Up to 20pt Deduction per 3 categories | 90% of the students should score 0 | 96.3% |

Table 2. Patient Care Assessment Results

The faculty observed that:

- Students had excellent performance in taking patient history and having a clear understanding of the importance of a good patient history.
- Students had excellent performance in preparing their patient for an imaging exam and communicating necessary preparatory information while radiographing the patient.
- Students proficiently and consistently chose the proper radiographic technical factors for the type of radiographic procedure they were performing.

No weaknesses were observed in this assessment so no corrective action is recommended.

**Assessment #2 (Indirect)**

In a second indirect assessment, the Externship Coordinator surveyed 47 senior extern students in fall 2007 as to how well the program prepared them in the areas of patient care, as shown in Table 3 below.

| Performance Criteria | Assessment Methods | Measurement Scale | Minimum Acceptable Performance | Results |
|---|---|---|---|---|
| Identify Patient | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 97% |
| Proper Exam Ordered | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 92% |
| Accurate Patient History | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 97% |
| Pregnancy Issues | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 95% |
| Shielding | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 95% |
| Transporting | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 92% |
| Patient Comfort | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 92% |
| Patient Safety | Student Survey | 1 – 4 Scale | 90% of the students will agree or strongly agree (3 or 4) | 86% |

Table 3 Externship Survey Results

Faculty analysis of the results showed that:

- The students indicated that OIT prepared them well for patient identification, ascertaining that proper exams are ordered, taking accurate patient history, investigating pregnancy issues prior to the exam, proper and safe shielding of the patient, transporting methods, and assuring patient comfort.
- The students indicated that they were not well prepared for patient safety while moving a patient from one transporting device to another or helping a patient on and off of the exam table, gurney, hospital bed, and wheelchair.
- Students on campus are not able to simulate patient safety while transporting or during the exam because OIT does not have adequate patient care equipment to perform realistic scenarios.
- Local hospital currently does not allow for student/patient interactions with patient safety equipment.

The faculty decided to:

- Appeal to OIT for patient care equipment that would help with patient care simulations.
- Appeal to Sky Lakes Medical Center to allow radiology students more exposure to patient contact while transporting and radiographing the patient.
- Appeal to our affiliate externship sites for donations of used transportation equipment and medical equipment for our patient care labs.

**Assessment #3 (Direct)**

Finally the faculty examined the student scores in Patient Care Knowledge on the American Registry of Radiologic Technologist (ARRT) registry exam, included as appendix B. The results indicate that the mean scaled score for OIT 2007 ARRT examinees was 9.1 which exceeds the national mean score of 8.8.

Detailed records of this assessment can be found in the Radiologic Science assessment coordinator's notebook.

**Student Learning Outcome #7: Demonstrate radiation safety for self, staff, and patients as set forth by the ALARA standard**

The faculty conducted an analysis of where this outcome is reflected in the curriculum. The mapping of this outcome to Radiologic Science courses can be found in Appendix A, Student Learning Outcome-Course Matrix, table A-3.

**Assessment #1 (Direct)**

To examine this outcome the faculty observed and assessed 48 junior students during practical exams in RDSC 301 Radiographic Positioning III during fall term 2007.The faculty assessed radiation safety in regards to shielding, SID, and repeat rate. Table 4 below shows the performance criteria and results for this assessment.

| Performance Criteria | Assessment Methods | Measurement Scale | Minimum Acceptable Performance | Results |
|---|---|---|---|---|
| Standard 8: Provide Radiation Protection for the patient (shielding) | Final Practical Exam | 0 equals no point deduction | 90% of the students should score 0 | 91% |
| Provide Adequate Patient Safety and Care (no repeat films/adequate collimation of the x-ray beam) | Final Practical Exam | 0 equals no point deduction | 90% of the students should score 0 | 100% |

Table 4. Radiation Safety Results

The faculty has been working towards proficiency in regards to patient shielding by giving the students certain steps to follow during practical exams which cues them to use the shielding. This is a step that students tend to forget although shielding is one of the most important steps in assuring patient safety from over-exposure in sensitive anatomical structures. The students have improved in this area as shown in the results and compared to past practical exams. The faculty will continue to make radiation safety paramount in all areas of radiation exposure.

**Assessment #2 (Direct)**

As a second measure on this outcome, the faculty assessed 47 extern students by administering a 100 question test on the effects of radiation on the human body. The faculty identified ten questions from the exam that demonstrate very specific knowledge that a senior student should know at this point in their clinical externship. Table 5 below shows the results on questions pertaining to the biological effects of radiation exposure.

| **Question number** | **Percent of Students Answering Correctly** | **The Questions** |
|---|---|---|
| 1.1 | 93.48% | Which of the following defines the word attenuation? |
| 1.4 | 91.30% | Which of the following interactions is MOST responsible for the differences in densities between bone and soft tissue in radiographs? |
| 1.8 | 93.48% | What is the effective atomic number of soft tissue? |
| 1.10 | 84.78% | Which of the following radiations has the least penetrating ability? |
| 1.17 | 95.65% | As the effective atomic number of the body part increases, the amount of photoelectric absorption_____? |
| 1.19 | 69.57% | What factor primarily differentiates the probability of occurrence of the various interactions of x-radiations with human tissue? |
| 1.36 | 100% | Which of the following tissues possesses the greatest ability to absorb radiant energy through the process of PE? |
| 1.38 | 71.74% | The greatest amount of biological damage in the human tissue is produced by ionizing with a _____? |
| 1.47 | 95.65% | Which of the following is the least radiosensitive? |
| 1.52 | 71.74% | Which of the following has the major stages of an Acute Radiation Syndrome in order? |

Table 5. Biological Effects of Radiation Exposure

Faculty analysis of the results showed that the students demonstrated overall proficiency in most categories. Using 75% as a basic standard for performance, there are three areas where students scored below a passing level. However, the question content for these three items is of a more obscure nature**.** Therefore we do not feel that action will be taken at this time.

**Assessment #3 (Direct)**

As a third measure on this outcome, the faculty again assessed 47 extern students by selecting another ten questions from the same test this time focused on radiation protection. Table 6 below shows the results on questions pertaining to the radiation protection.

| **Question number** | **Actually percentage** | **The Questions** |
|---|---|---|
| 1.3 | | What material is best for stopping x-rays and gamma rays? |
| 1.81 | 95.65% | The cord leading to the exposure switch of a portable radiographic unit should be at least _____ in length? |
| 1.83 | 86.96% | The maximum period of time that the TLD may be worn as a personal monitoring device is _____ months? |
| 1.80 | 91.30% | Beam quality for energy ranges over 70 kVp would require how many mm A1? |
| 1.85 | 100% | The purpose of filtration is to _____ the beam by removing _____ energy photons. |
| 1.86 | 89.13% | If a radiographer stands four feet away from the tube and receives 1 mR/hr., what will the exposure be if the same radiographer stands 8 ft away from the tube? |
| 1.87 | 86.96% | The least effective beam limiting device is? |
| 1.88 | 100% | The radiographic beam should be collimated so that it is _____? |
| 1.91 | 100% | Whenever scatter radiation is reduced, the radiographer's exposure is _____ ? |
| 1.95 | 69.57% | Which of the following protective barrier factors is defined as the proportional amount of time during which the x-ray beam is directed towards a particular barrier? |

Table 6. Radiation Protection

Faculty analysis of the results showed that the students demonstrated overall proficiency in all categories except one. After reviewing the question we believe that the wording of the question could have contributed to the lower than desirable results. No action required at this time.

**Assessment #4 (Direct)**

Finally the faculty examined the students score in Radiation Protection on the American Registry of Radiologic Technologist (ARRT) registry exam, included as appendix B. The results indicate that the mean scaled score for OIT 2007 ARRT examinees was 8.9 which exceeds the national mean score 8.7.

Detailed records of this assessment can be found in the Radiologic Science coordinator's notebook.

## V. Summary of student learning

During the 2007-08 academic year, the Radiologic Science faculty formally assessed the student learning outcomes summarized below. Additional details can be found in department records.

**Student learning outcome #4: Demonstrate effective patient care skills**

Strengths: Junior student demonstrated proficiency in taking a patient history prior to an exam, preparing a patient for an x-ray exam, communicating effectively to the patient prior to and during the exam, and selecting the proper technical factors for each radiographic exam.

Areas needing improvement: Senior extern students, however, indicated that they were not well prepared in transporting patients who are attached to medical equipment. They are also weak in moving a patient from one transporting device to another.

Action plans: The program has already obtained additional medical equipment and space at Sky Lakes Medical Center to provide additional practice in patient transport skills. During winter term 2009, sophomore students in RDSC 205 Patient Care will receive additional instruction and hands-on practice in these skills. This deficiency will be reassessed winter term 2009.

**Student learning outcome # 7: Demonstrate safety for self, staff, and patients as set forth by the ALARA standard**

Strengths: Upper division students demonstrated proficiency in providing radiation shielding for the patient, providing adequate patient safety and care when choosing the technical factors, knowledge of biological effects of radiation exposure, knowledge of radiation protection, and overall knowledge of radiation protection for the general public and self.

Areas needing improvement: none at this time.

**Appendix A-1**
**SLO #3 – Critical Thinking – Curriculum Map – Course Matrix**

## BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCE

**Professional Courses**

| **Sophomore Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 201* | Imaging Techniques I | 4 | | | |
| RDSC 235* | Equipment Operation and Maintenance | 3 | | | |
| BIO 335 | Cross-Sectional Anatomy | 3 | | | |
| RDSC 202* | Imaging Techniques II | 4 | | | |
| RDSC 205* | Patient Care | 3 | | | |
| RDSC 210* | Radiographic Positioning I | 4 | | | |
| RDSC 272* | Radiation Protection | 3 | | | |
| PHY 217 | Physics of Medical Imaging | 3 | | | |
| RDSC 211* | Radiographic Positioning II | 4 | | | |
| RDSC 233* | Contrast Media Procedures | 4 | | | |

| **Junior Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 301* | Radiographic Positioning III | 4 | | | |
| RDSC 320* | Surgical, Trauma and Mobile Radiography | 4 | | | |
| BIO 336 | Pathophysiology | 3 | | | |
| RDSC 356* | Magnetic Resonance | 4 | | | |
| RDSC 366* | Radiographic Pathology | 3 | | | |
| RDSC 355* | Computed Tomography | 4 | | | |
| RDSC 326* | Cardiovascular/Interventional Technology | 4 | | | |
| RDSC 354* | Mammography | | | | |
| or | | | | | |
| RDSC 365* | Advanced Quality Assurance/Quality Control | 4 | | | |
| RDSC 388* | Externship Orientation | 2 | | | |

| **Senior Year** | | Term Hours | F | W | S | S |
|---|---|---|---|---|---|---|
| RDSC 410* | Radiologic Science Externship | **15** | **15** | **15** | **15** | |

* Core Imaging Courses

For the Radiologic Science program an imaging course is defined as one with an RDSC prefix.

** Courses listed under Communication requirements for General Education.

**Appendix A-2**
**SLO #4 – Patient Care Skills – Curriculum Map – Course Matrix**

## BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCE

**Professional Courses**

| **Sophomore Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 201* | Imaging Techniques I | 4 | | | |
| RDSC 235* | Equipment Operation and Maintenance | 3 | | | |
| BIO 335 | Cross-Sectional Anatomy | 3 | | | |
| RDSC 202* | Imaging Techniques II | 4 | | | |
| RDSC 205* | Patient Care | 3 | | | |
| RDSC 210* | Radiographic Positioning I | 4 | | | |
| RDSC 272* | Radiation Protection | 3 | | | |
| PHY 217 | Physics of Medical Imaging | 3 | | | |
| RDSC 211* | Radiographic Positioning II | 4 | | | |
| RDSC 233* | Contrast Media Procedures | 4 | | | |

| **Junior Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 301* | Radiographic Positioning III | 4 | | | |
| RDSC 320* | Surgical, Trauma and Mobile Radiography | 4 | | | |
| BIO 346 | Pathophysiology | 3 | | | |
| RDSC 356* | Magnetic Resonance | 4 | | | |
| RDSC 366* | Radiographic Pathology | 3 | | | |
| RDSC 355* | Computed Tomography | 4 | | | |
| RDSC 326* | Cardiovascular/Interventional Technology | 4 | | | |
| RDSC 354* | Mammography | | | | |
| or | | | | | |
| RDSC 365* | Advanced Quality Assurance/Quality Control | 4 | | | |
| RDSC 388* | Externship Orientation | 2 | | | |

| **Senior Year** | | Term Hours | F | W | S | S |
|---|---|---|---|---|---|---|
| RDSC 410* | Radiologic Science Externship | **15** | **15** | **15** | **15** | |

* Core Imaging Courses

For the Radiologic Science program an imaging course is defined as one with an RDSC prefix.

** Courses listed under Communication requirements for General Education.

**Appendix A-3**
**SLO #7 – Radiation Safety – Curriculum Map – Course Matrix**

## BACHELOR OF SCIENCE IN RADIOLOGIC SCIENCE

**Professional Courses**

| **Sophomore Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 201* | Imaging Techniques I | 4 | | | |
| RDSC 235* | Equipment Operation and Maintenance | 3 | | | |
| BIO 335 | Cross-Sectional Anatomy | 3 | | | |
| RDSC 202* | Imaging Techniques II | 4 | | | |
| RDSC 205* | Patient Care | 3 | | | |
| RDSC 210* | Radiographic Positioning I | 4 | | | |
| RDSC 272* | Radiation Protection | 3 | | | |
| PHY 217 | Physics of Medical Imaging | 3 | | | |
| RDSC 211* | Radiographic Positioning II | 4 | | | |
| RDSC 233* | Contrast Media Procedures | 4 | | | |

| **Junior Year** | | Term Hours | F | W | S |
|---|---|---|---|---|---|
| RDSC 301* | Radiographic Positioning III | 4 | | | |
| RDSC 320* | Surgical, Trauma and Mobile Radiography | 4 | | | |
| BIO 346 | Pathophysiology | 3 | | | |
| RDSC 356* | Magnetic Resonance | 4 | | | |
| RDSC 366* | Radiographic Pathology | 3 | | | |
| RDSC 355* | Computed Tomography | 4 | | | |
| RDSC 326* | Cardiovascular/Interventional Technology | 4 | | | |
| RDSC 354* | Mammography | | | | |
| or | | | | | |
| RDSC 365* | Advanced Quality Assurance/Quality Control | 4 | | | |
| RDSC 388* | Externship Orientation | 2 | | | |

| **Senior Year** | | Term Hours | F | W | S | S |
|---|---|---|---|---|---|---|
| RDSC 410* | Radiologic Science Externship | **15** | **15** | **15** | **15** | |

- Core Imaging Courses
  For the Radiologic Science program an imaging course is defined as one with an RDSC prefix.

** Courses listed under Communication requirements for General Education.

Appendix B
2007 OIT ARRT National Exam Results

**SCHOOL OF RADIOGRAPHY**
**OREGON INSTITUTE OF TECHNOLOGY**
**JENNY A KELLSTROM**
**3201 CAMPUS DR SEMON HALL 232**
**KLAMATH FALLS, OR 97601-0000**

**School ID:** 7152
**Date Generated:** 04/21/2008

## SUMMARY REPORT FOR 2007

Radiography

| Section | Section Content | Number of Questions | Mean Section Scaled Score |
|---|---|---|---|
| A | Radiation Protection | 30 | 8.9 |
| B | Equipment Operation and Maintenance | 30 | 8.5 |
| C | Image Production and Evaluation | 50 | 8.7 |
| D | Radiographic Procedures | 60 | 8.7 |
| E | Patient Care | 30 | 9.1 |

| MEAN SCALED SCORE FOR TOTAL TEST: | 87.5 | PERCENT OF EXAMINEES PASSING: | 95 | NUMBER OF EXAMINEES: | 43 |
|---|---|---|---|---|---|

**NOTES:**

These summary statistics are based on program graduates taking the test for the first time (refer to NUMBER OF EXAMINEES box in the table to the right).

Total scaled scores are reported on a scale of 1 to 99. These are not percentages. A total scaled score of 75 or greater is required to pass.

Section scores are reported on a scale of 1 to 10. Pass/Fail status is not determined from section scores. Section scores are for advisory purposes only. They provide a general indication of test performance in each content area.

## National Comparison Report

**SCHOOL OF RADIOGRAPHY**
**OREGON INSTITUTE OF TECHNOLOGY**
**JENNY A KELLSTROM**
**3201 CAMPUS DR SEMON HALL 232**
**KLAMATH FALLS, OR 97601-0000**

**School ID:** 7152
**Date Generated:** 04/21/2008

This report compares the examination performance of first-time candidates from your program to first-time candidates from all U.S. programs.

Report based on dates from **01/2007** through **12/2008**

**Scaled Scores**

| Calendar Year | Group | Number Candidates | Section Means A | B | C | D | E | Total Mean | Percentile Rank | % Pass |
|---|---|---|---|---|---|---|---|---|---|---|
| 2007 | Program | 43 | 8.9 | 8.5 | 8.7 | 8.7 | 9.1 | 87.5 | 78 | 96 |
| 2007 | USA | 14142 | 8.7 | 8.3 | 8.3 | 8.4 | 8.8 | 84.7 | - | 90.8 |
| 2008 | Program | 2 | - | - | - | - | - | - | - | - |
| 2008 | USA | - | - | - | - | - | - | - | - | - |

Notes:
(1) A percentile rank indicates the percentage of scores at or below the corresponding mean scaled score. Percentile ranks are rounded to the nearest whole number.
(2) These percentile ranks were not obtained by comparing your school mean to all other school means, but rather by comparing the mean score of your program´s graduates to the distribution of scores for all US graduates.
(3) Mean scores and percentile ranks based on few candidates are not stable and should be interpreted with caution.
(4) Content specifications that serve as the basis for section scores are periodically revised. Consult this link to see the content specifications for the past several years.
(5) To ensure student confidentiality, dashes indicate either too few candidates, or data is not yet available, or does not apply.