



PHARMACY COLLEGE ADMISSION TEST

**PCAT Basics:  
Purpose, Structure, and  
Administration**

Effective: July 2016

PEARSON

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# Table of Contents

<b>Acknowledgments</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>1</b>
Pearson .....	1
American Association of Colleges of Pharmacy .....	1
History of the PCAT .....	2
<b>Test Structure</b> .....	<b>3</b>
PCAT Content Areas .....	3
<b>Test Administration</b> .....	<b>10</b>
Registration and Scheduling .....	10
Test Administration .....	10
<b>Score Reporting</b> .....	<b>11</b>
Personal Official Score Reports .....	12
Official Transcripts .....	13
Transcript Service .....	15
<b>Glossary</b> .....	<b>16</b>
<b>References</b> .....	<b>17</b>
<b>Figures</b>	
1 PCAT Subtests .....	4
2 PCAT Writing Subtest Blueprint.....	4
3 PCAT Biological Processes Subtest Blueprint .....	5
4 PCAT Chemical Processes Subtest Blueprint .....	6
5 PCAT Critical Reading Subtest Blueprint .....	7
6 PCAT Quantitative Reasoning Subtest Blueprint .....	8
7 Sample Official Score Report .....	12
8 Sample Official Transcript .....	14



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# Introduction

The *Pharmacy College Admission Test* (PCAT®) is a norm-referenced standardized test that is developed to measure the abilities, aptitudes, and skills that pharmacy schools deem essential for success in their programs. In an effort to ensure the continuing relevance and usefulness of the PCAT for assessing the prerequisite knowledge and skills of candidates for admission to professional pharmacy programs, the test content is periodically reviewed and revised to ensure that it accurately reflects current pharmacy school prerequisite requirements in the sciences, math, and language arts.

This publicly available document provides information about PCAT history, content, structure, administration, and score reporting. The following additional publications are also available on the PCAT website: *Interpreting PCAT Scores*, with information useful in interpreting all PCAT scaled scores, percentile ranks, and Writing scores; and *PCAT Reliability and Validity*, with information and research results related to the reliability and validity of the test. Also available only to qualified professionals is the printed *PCAT Technical Manual* (Pearson, 2016), which contains detailed data for the current normative sample, the current 2015 percentile ranks, compendium tables that can be used to compare the previous 2011 percentile ranks with the current percentile ranks, and a table showing differences in Composite percentile rank between those with and without the Verbal Ability subtest.

To request a copy of the *PCAT Technical Manual*, or to offer suggestions regarding the PCAT or about this or any other related publications, please contact PCAT Customer Relations at the following email address: [Scoring.Services@Pearson.com](mailto:Scoring.Services@Pearson.com).

## Pearson

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Pearson develops and publishes tests for college admission and business, as well as materials for service providers in education, clinical psychology, speech and language, and occupational therapy. Its staff includes professionals in testing and measurement, specialized support personnel for test production and design, editorial assistance, and data analysis services. A specialized team within the Pearson Clinical Assessment group is responsible for the development, administration, and monitoring of the PCAT.

## American Association of Colleges of Pharmacy

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The American Association of Colleges of Pharmacy (AACP) was founded in 1900 and is the primary national organization representing the interests of pharmaceutical education and educators. Based in Washington, D.C., the AACP is composed of all colleges and schools of pharmacy accredited by the Accreditation Council for Pharmacy Education. The AACP includes approximately 6,400 full-time faculty, 62,500 professional degree students, and 5,100 individuals pursuing graduate study (American Association of Colleges of Pharmacy, 2015). The AACP and its members are committed to maintaining excellence in pharmaceutical education and to helping member schools prepare well-qualified graduates for entrance into the profession of pharmacy. The PCAT Advisory Committee of the AACP has worked closely with Pearson (formerly The Psychological

Corporation) for many years to monitor annual PCAT score data and to suggest periodic improvements to the test to ensure that it continues to reflect changes in pharmacy school prerequisite requirements and curricula.

## History of the PCAT

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In 1973, the AACP conducted a study of pharmacy school admissions processes. The results of the study indicated that most colleges of pharmacy established their own admissions policy and basic requirements and then selected from students who met those requirements. At that time, 82% of the colleges of pharmacy expressed interest in having an admissions test specific to pharmaceutical education. Based on this response, the AACP concluded that a national exam would be beneficial in providing a source of data on student placement and retention.

The AACP then established the PCAT Advisory Committee to work with The Psychological Corporation (now Pearson) to develop a norm-referenced standardized test. Following experimental administrations in 1973, the first PCAT norms were established, and the PCAT was administered for admissions purposes to more than 1,600 applicants in the fall of 1974.

Over the ensuing years, periodic revisions have been made to the contents and structure of the test. In 1999, the PCAT Advisory Committee requested a revision of the PCAT test blueprint to reflect changing prerequisites of pharmacy schools. Because several pharmacy schools had developed their own essay assessments, the Advisory Committee also suggested that an essay component be added to ensure that standardized administration, scoring, and reporting processes were followed. In response to these needs, new test forms were developed and an essay component was field-tested and then introduced in 2005 as an operational component of the test.

Following ongoing discussions with the PCAT Advisory Committee, changes to the Quantitative Ability subtest were introduced in 2007 to include items on basic math (replacing geometry items) and a greater proportion of probability/statistics and pre-calculus items. At that time, the lengths of each multiple-choice subtest were shortened and a second Writing subtest was added as a way to field-test new prompts (topics on which candidates write) without changing the overall length of the test. Additional recommendations made by the Committee in 2010 resulted in more changes to the PCAT for July 2012. The Biology subtest was changed to include a greater proportion of items on genetics, health, and human anatomy and physiology, and the Chemistry subtest was changed to include items on basic biochemistry processes. In 2014, the Committee recommended even greater structural and content changes, which have since been implemented and are described in detail in the following section.

In addition to these content and structural changes, the PCAT Writing score has also changed over the years. During the first 2 years that the Writing subtest was an operational component of the PCAT (2005–2006 and 2006–2007), a single score was reported that represented each candidate's command of conventions of language. From June 2007 through January 2011, Writing scores were reported for Conventions of Language and Problem Solving, along with mean scores indicating the averages of all Writing scores earned by candidates during a given test administration. Since the July 2012 administration, a single earned Writing score has been reported, based on an assessment of a candidate's ability to apply conventions of language and problem-solving skills in the composition of an essay. Beginning with the July 2014 administration, the mean Writing score is based on scores earned by all candidates during the 12 months prior to a given test administration window.

All PCAT test forms consist of subtests made up of unique sets of operational items that are used to determine candidates' scores and experimental items that are being field-tested for use on future test forms. All new PCAT items are written and reviewed by contracted individuals with content expertise, according to detailed guidelines provided to them by Pearson. Prior to field-testing new test items, each item is reviewed by Pearson subject-matter experts and editorial staff for content appropriateness, style and format consistency, and gender and ethnic bias. Only items that are judged satisfactory by the contracted reviewers and by Pearson staff are considered for inclusion as experimental items on PCAT test forms for field-testing.

After field-testing, only those experimental items with data that meet specific acceptance criteria are considered for subsequent use as operational items. After experimental items are field-tested, the items are analyzed using item response theory (IRT; the Rasch model) to determine the difficulty and discriminating power of each item. Only items that satisfy established criteria for both psychometric properties and content relevance are considered for use in new test forms. This process ensures the development of psychometrically sound test forms and the continued integrity of the PCAT program.

## PCAT Content Areas

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Prior to July 2016, the PCAT consisted of a Writing subtest and five multiple-choice subtests: Verbal Ability, Biology, Chemistry, Reading Comprehension, and Quantitative Ability. However, beginning with the July 2016 PCAT administration, the test no longer contains the Verbal Ability subtest, and the four remaining multiple-choice subtests have been renamed as Biological Processes, Chemical Processes, Critical Reading, and Quantitative Reasoning so as to more accurately reflect the content assessed.

The Writing subtest presents a prompt stating a problem that candidates address by proposing a solution in an original essay. The Biological Processes and Chemical Processes subtests continue to contain stand-alone items but now also contain items associated with passages that address specific problems, research issues, or novel situations (e.g., focusing on a specific research study or experiment) and require candidates to draw upon their content knowledge and use their analytic skills to interpret and evaluate new information. The Critical Reading subtest continues to contain passages on science-related topics but also includes passages on humanities and social science topics, all of which require candidates to interpret, analyze, and evaluate what they read. The Quantitative Reasoning subtest now contains some items on ratios and consists of many more word-problem type items that describe a relevant, practical scenario or situation and pose a quantitative problem that candidates must solve.

Although not reported separately, critical-thinking skills are measured in the context of items throughout the multiple-choice subtests, and an important aspect of critical thinking is represented in the problem-solving criteria used to determine the Writing score. Each essay prompt states a problem for which candidates must compose an essay that proposes a solution.

Candidates indicate their answers to multiple-choice items and write their essays in a computer-based test (CBT) format. Experimental items are embedded within each multiple-choice subtest. Each subtest is timed separately, and the length of a typical test administration—including introductory instructions and a rest break—is about four hours. Candidates receive a score for each multiple-choice subtest, a Composite score for the four multiple-choice subtests combined, and a Writing score (see the “Interpreting PCAT Scores” document). Only the operational items in each subtest count toward candidates’ scores and are reported on each candidate’s personal Score Report and on Official Transcripts sent to institutions. For multiple-choice items, no points are subtracted for incorrect responses.

Figures 1–6 represent the PCAT test blueprint and include lists of content objectives addressed by each of the PCAT subtests. Figure 1 lists the current PCAT subtests in the order they are administered on each PCAT test date, and Figures 2–6 show the detailed content objectives for each of the subtests.

PCAT Subtest	Number of Items	Time Allowed (in minutes)
<b>Part 1: Writing</b>	1 prompt	30
<b>Part 2: Biological Processes</b>	48	45
<b>Part 3: Chemical Processes</b>	48	45
<b>Rest Break (15 minutes)</b>		
<b>Part 4: Critical Reading</b>	48	50
<b>Part 5: Quantitative Reasoning</b>	48	50
<b>Total Test</b>	<b>192 multiple-choice + 1 prompt</b>	<b>3 hrs. 40 min. + Rest Break</b>

Figure 1 PCAT Subtests

Writing Prompt Content Objectives
<b>Health Issues</b> (issues related to public health, medicine, nutrition, fitness, prevention, treatments, therapies, medications, drugs, attitudes)
<b>Science Issues</b> (issues related to research, theories, findings, applications, controversies, education, attitudes)
<b>Social, Cultural, or Political Issues</b> (issues related to beliefs, attitudes, behaviors, trends, laws, policies)

Figure 2 PCAT Writing Subtest Blueprint



<b>Biological Processes Content Objectives</b>
<b>General Biology</b>
<b>Cellular and Molecular Biology</b>
Structure and functions of cells
Gene expression
Cell division and growth
Energy transformations
Metabolism
<b>Diversity of Life Forms</b>
Genetics
<b>Health</b>
Nutrition
Diseases
Drugs
<b>Microbiology</b>
<b>Microorganisms</b>
<b>Infectious Diseases &amp; Prevention</b>
<b>Microbial Ecology</b>
<b>Medical Microbiology</b>
<b>Immunity</b>
<b>Human Anatomy and Physiology</b>
<b>Structure</b>
Cells
Tissues
Organs
<b>Systems</b>
Skeletal/muscular/nervous
Circulatory/respiratory
Excretory/digestive
Endocrine/reproductive
Integumentary/immune

Figure 3 PCAT Biological Processes Subtest Blueprint

Chemical Processes Content Objectives	
<b>General Chemistry</b>	<b>Organic Chemistry</b>
<b>Atomic Theory</b>	<b>Structure and Properties</b>
Structure	Structural formulas and bonding
Ions	Properties of organic compounds
Periodicity	<b>Reactions of Organic Compounds</b>
<b>Chemical Bonding</b>	Oxidation–reduction reactions
Nomenclature/formulas	Hydration and dehydration
Bonding	Hydrolysis
<b>Reactions and Reaction Mechanisms</b>	Addition/substitution/elimination
Types of reactions	<b>Basic Biochemistry Processes</b>
Balancing equations	<b>DNA and RNA</b>
Equilibrium	<b>Lipids</b>
Stoichiometry	<b>Proteins</b>
<b>Kinetic Theory</b>	
States of matter	
Gas laws	
Causes and effects of changes in states	
<b>Solutions</b>	
Concentration (pH)	
Solubility	
Acid–base theories	
<b>Nuclear Chemistry: Radioisotopes</b>	

Figure 4 PCAT Chemical Processes Subtest Blueprint

<b>Critical Reading Content Objectives</b>
<b>Comprehension (recognition, understanding)</b>
<b>Words in Context</b> (defining a term used in the passage)
<b>Main Ideas</b> (identifying or inferring the main idea of a paragraph or group of paragraphs)
<b>Supporting Details</b> (identifying facts or ideas explicitly stated in the passage)
<b>Drawing Conclusions</b> (making inferences from statements in the passage)
<b>Analysis (inference, interpretation)</b>
<b>Relationships Between Ideas</b> (identifying relationships between ideas in different parts of a paragraph or in different paragraphs)
<b>Author's Purpose</b> (inferring the author's purpose for writing the entire passage or for including a statement in part of the passage)
<b>Author's Tone</b> (inferring author's attitude in the entire passage or in a specific statement in part of the passage)
<b>Facts/Opinions</b> (distinguishing between statements of fact and expressions of opinion)
<b>Rhetorical Strategies</b> (identifying methods used by the author for effect, to persuade, or to make a point)
<b>Evaluation (reasoned judgment)</b>
<b>Bias</b> (inferring an assumption made by the author or the author's viewpoint, preference, or position in entire passage or in a specific statement in part of the passage)
<b>Support in an Argument</b> (evaluating the effectiveness of elements of support used by the author in the passage)
<b>Author's Conclusion/Thesis</b> (identifying or inferring the author's overall point in the passage, or evaluating how well the author's overall point follows from the support provided)

Figure 5 PCAT Critical Reading Subtest Blueprint

<b>Quantitative Reasoning Content Objectives</b>
<b>Basic Math</b>
<b>Fractions, Percentages, &amp; Decimals</b>
<b>Unit Conversions</b>
<b>Log Base 10</b>
<b>Ratios</b>
<b>Algebra</b>
<b>Expressions, Equations, and Inequalities</b>
Evaluate algebraic expressions for given values
Represent verbal quantitative situations as algebraic expressions or equations
Solve problems using linear equations and inequalities
Solve problems using equations and inequalities involving absolute value
Solve problems using equations and inequalities involving rational expressions
Solve quadratic equations and inequalities
Solve equations and inequalities involving 1 or 2 radicals
Solve systems of equations or inequalities involving 2 or 3 variables
<b>Functions</b>
Perform algebraic operations on functions
Determine compositions of functions
Determine inverses of functions
Determine and use maximum and minimum points
<b>Probability &amp; Statistics</b>
<b>Measures of Central Tendency</b>
<b>Variation</b>
<b>Graphical</b>
<b>Probability</b>
<b>Statistical Concepts</b>

Figure 6 PCAT Quantitative Reasoning Subtest Blueprint

<b>Quantitative Reasoning Content Objectives (continued)</b>
<b>Precalculus</b>
<b>Functions</b>
Graph and identify domains, ranges, intercepts, and zeros of exponential functions
Logarithms (natural or other base with multiple operations)
Solve problems related to exponential and logarithmic functions
Graph and identify domains, ranges, intercepts, zeros, and inverses of the circular functions
Perform algebraic operations on functions
Identify and use composite functions
<b>Complex Numbers</b>
<b>Vectors</b>
Add vectors graphically and algebraically
Perform scalar multiplications
Represent and/or recognize vector equations of lines and planes
<b>Calculus</b>
<b>Limits</b> (Find: Limits of functions, one-sided limits, infinite limits)
<b>Continuity</b> (Interpret graphs of continuous and discontinuous functions)
<b>Derivatives</b>
Find derivatives of algebraic functions by means of the sum and product, power rule, apply the mean value theorem
Use the chain rule to find derivatives of composite functions
Solve problems by differentiation (e.g., velocity and acceleration)
Use and/or interpret derivative tests to find extrema, points of inflection, intervals
Interpret and/or use the derivatives of circular functions and their inverses
Interpret and/or use the derivatives of transcendental functions
Determine the derivatives of composite functions involving the circular and transcendental functions
Use implicit differentiation
Determine related rates
<b>Integrals</b>
Find antiderivatives, and interpret C
Understand and use sigma notation for simplifying sums
Approximate areas bounded by curves
<b>Integration</b>

Figure 6 PCAT Quantitative Reasoning Subtest Blueprint (continued)

# Test Administration

The PCAT website (PCATweb.info) provides all the necessary information about the test for interested candidates, including registration procedures, deadline dates, Test Center information and regulations, fee requirements, descriptions of the PCAT content, and other relevant information. The Candidate Information Booklet (CIB) also contains much of this information. The CIB is available as a printed booklet that is distributed each year to Test Centers and pharmacy schools and as a PDF file that can be downloaded from the PCAT website. Posters showing the test dates and sources of information are also distributed to colleges of pharmacy, feeder schools, and Test Centers.

All PCAT tests are currently administered in a computer-based (CBT) format at Pearson VUE Test Centers during testing windows consisting of multiple dates within one or more months.

## Registration and Scheduling

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Nearly all candidates currently register to take the test and pay all necessary fees online at the PCAT website, though candidates may also register through the mail with a printed registration form if desired. After registering for the PCAT, candidates then schedule a test date with Pearson VUE, where all PCAT tests are now administered. The PCAT is administered during four time windows each academic year at Pearson VUE Test Centers in the United States, Canada, and a few other international sites. Candidates must register for the test well in advance of a test date, according to deadlines posted on the PCAT website. No standby candidates are admitted for testing. Special accommodations are available for individuals with disabilities or with other documented special needs.

## Test Administration

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At each Pearson VUE testing center, candidates are required to follow standard testing procedures during all PCAT administrations. Experienced, qualified examiners supervise the test sessions and maintain the confidentiality and security of the PCAT at all times. Each candidate is required to present valid forms of identification at a Test Center, and strict security precautions are followed during test administrations to ensure the validity of the scores obtained.

# Score Reporting

Immediately following a candidate's test event, a preliminary score report is printed at the Pearson VUE Test Center. The preliminary score report displays the candidate's multiple-choice scaled scores and percentile ranks, pending verification by Pearson that no irregularities occurred at the Test Center that could have affected the examinee's performance. The Writing score is not displayed on the preliminary score report because the essay involves manual scoring, and the result is not immediately available. For these reasons, the preliminary score report is not considered equivalent to the personal Official Score Report and the Official Transcript that are generated only after all of the candidate's test score data have been fully verified and the Writing score is assigned.

Approximately 5 weeks after a PCAT administration, personal Official Score Reports are produced for candidates, and Official Transcripts are sent to colleges of pharmacy designated by candidates. Each candidate is entitled to one Official Score Report for personal use and three Official Transcripts that are sent to designated institutions. Official Score Reports are not intended for institutional use. At approximately the same time that personal Official Score Reports are made available to candidates, Pearson sends Official Transcripts directly to schools and colleges of pharmacy and sends PCAT score data to the Pharmacy College Application Service (PharmCAS), which then distributes these data to subscribing institutions.

The personal Official Score Reports and Official Transcripts indicate candidates' multiple-choice subtest and Composite scaled scores, ranging from 200–600, and percentile ranks, ranging from 1–99. The Composite scaled score represents an unweighted average of the four multiple-choice subtest scaled scores. The Composite percentile rank is not an average of the four multiple-choice subtest scores, but it is determined separately based upon the norm group Composite. All scaled scores earned since October 2004 are reported on the same scale and are thus comparable from year to year.

The percentile ranks are periodically renormed (recalculated relative to a specific normative sample) to stay relevant to as recent a group of PCAT candidates as practical. Beginning with scores earned during the July 2016 test administration, percentile ranks are based on the current 2015 norms and do not necessarily correspond to the same scaled scores as previous percentile ranks that were based on the 2011 norms (in effect from July 2012 through June 2016) or on the 2007 norms (in effect from June 2008 through June 2012).

The personal Official Score Report and Official Transcript also list each candidate's Writing score. The Writing score is reported on a scale of 1.0 to 6.0 (with 0.0 scores reported only to indicate score invalidations), and is accompanied by a mean score (reported to two decimal places) that indicates the average of all Writing scores earned by candidates taking the test during the 12 months prior to an administration window. The Writing score reflects candidates' ability to apply conventions of language and problem-solving skills in the composition of an original essay suggesting a solution to a problem.

## Personal Official Score Reports

As shown in Figure 7, the personal Official Score Report lists the date on which the candidate took the PCAT, the scaled scores and percentile ranks for the multiple-choice subtests and Composite, the Writing score earned by the candidate, and the mean Writing score for the testing window. In addition to a personal Score Report, each candidate also receives a receipt listing the schools to which Official Transcripts were sent. Candidates may request additional Official Transcripts through the PCAT website (PCATweb.info).

**Pearson**  
19500 Bulverde Road  
San Antonio, TX 78259

**PCAT**  
PHARMACY COLLEGE ADMISSION TEST

### OFFICIAL SCORE REPORT

Candidate Name: A. Sample Candidate  
CID: 00000000000  
Test Date: July 18, 2016

Multiple-Choice	SS	PR	Score	Mean
Biological Processes	407	50	4.5	3.36
Critical Reading	401	59		
Quantitative Reasoning	405	59		
Chemical Processes	411	60		
Composite	406	56		

SS = Scaled Score - Standardized scores based on items answered correctly and test form difficulty.  
PR = Percentile Rank - The % of examinees from the current norm group earning lower than a given score.  
Writing Score = An earned score assigned on a 6-point scale.  
Writing Mean = An average of all writing scores earned during the 12 months prior to the test date.

The scores displayed on this report are official but cannot be presented to schools as a substitute for an Official Transcript.

For more information, refer to: [www.pcatweb.info](http://www.pcatweb.info)

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Scores based on normative data copyright © 2016 by NCS Pearson, Inc. All rights reserved. Process Date: 8/16/2016

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Figure 7 Sample Official Score Report



## Official Transcripts

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Following each PCAT testing window, a pharmacy school receives an Official Transcript for each candidate who took the test and requested a transcript be sent to that school. Pharmacy schools may choose to receive Official Transcripts as printed documents directly from Pearson or as electronic files from the Pharmacy College Application Service (PharmCAS). Pharmacy schools that receive Official Transcripts directly from Pearson also receive a list of all the candidates whose scores were sent to their institution. In addition to those sent following a PCAT test administration, schools may also receive an Official Transcript any time that a candidate requests one be sent.

Since some candidates may have requested that an Official Transcript be sent to an institution prior to July 2016, colleges and schools of pharmacy may have received transcripts with scores based only on the 2011 norms. In such cases, Compendium Tables available in the 2016 edition of the *PCAT Technical Manual* can be used to compare percentile ranks based on the 2011 norms to those based on the 2015 norms. Scaled scores earned at any time since March 2004 are comparable without conversion. No Compendium Table is available to determine 6-point equivalents for older Writing scores earned on a 5-point scale, since such comparisons would be misleading due to the different number of possible score points (5 or 6) and the differing nature of the scores (separate scores for conventions of language and problem solving or a single score based on both criteria).

The Official Transcript, as shown in Figure 8, contains all of the same score information as the personal Official Score Report. In addition, the Official Transcript shows the candidate's scores for up to four previous attempts at the test earned within the five years prior to the most recent test date or prior to the date that the transcript was requested. The candidate's most recent PCAT scores appear first on the transcript, followed by scores obtained on the four most recent previous attempts. The test date is listed for each set of scores.

All multiple-choice scores are reported on the Official Transcript as scaled scores and percentile ranks. All percentile ranks are based on the 2015 norms (July 2011 through January 2015), and all Writing scores are based on a 6-point scoring scale. Percentile ranks for scores earned before July 2016 have been converted to equivalent 2015 percentile ranks, including Composite percentile ranks based on recalculated scaled scores that do not include the Verbal Ability subtest. However, Writing scores earned prior to July 2012 that were reported on a 5-point scale are not reported so as to avoid confusing them with current scores reported on a 6-point scale.

SAMPLE UNIVERSITY  
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 ADDRESS LINE 2  
 SAMPLETOWN, TX 12345 USA



**OFFICIAL TRANSCRIPT**  
**Pearson**

19500 Bulverde Road, Suite 201  
 San Antonio, TX 78259  
 1-800-622-3231  
 Scoring.Services@Pearson.com

School Code: 0000  
 Examinee Name: A. SAMPLE CANDIDATE  
 CID: 0000000000

Most Recent Test Date	Multiple-Choice Scores							Writing Score	
	Score	Verbal Ability	Biological Processes	Critical Reading	Quantitative Reasoning	Chemical Processes	Composite	Score	Mean
July 2016	SS	NA	407	401	405	411	406	4.5	3.45
	PR	NA	50	59	59	60	56		

Previous Test Dates	Multiple-Choice Scores							Writing Score	
	Score	Verbal Ability	Biological Processes	Critical Reading	Quantitative Reasoning	Chemical Processes	Composite	Score	Mean
January 2015	SS	401	403	400	404	410	404	4.0	3.38
	PR	NA	43	58	57	58	51		
September 2014	SS	398	407	402	406	409	406	3.5	3.28
	PR	NA	50	61	60	57	56		
January 2012	SS	399	400	397	391	405	398	NA	NA
	PR	NA	37	52	31	49	39		
NA	SS	NA	NA	NA	NA	NA	NA	NA	NA
	PR	NA	NA	NA	NA	NA	NA		

**Scaled Scores (SS)** for the multiple-choice subtests are calculated separately for each subtest, with the Composite representing an unweighted average of the subtest scaled scores. Scores for the multiple-choice subtests are listed under the current subtest titles rather than their previous titles. Composite SSs earned prior to July 2016 have been recalculated without Verbal Ability to be consistent with those earned since July 2016.

**Percentile Ranks (PR)** indicate the percentage of examinees from the current norm group who received a scaled score lower than a given score. PRs obtained from July 2016 on are based on the current **2015 norms**, which were determined from the performance of PCAT examinees from July 2011 through January 2015. PRs obtained prior to July 2016 were originally based on the **2011 norms** (June 2007 through January 2011) but for reporting purposes have been converted to the **2015 PRs**, including Composite PRs based on recalculated SSs that do not include the Verbal Ability subtest.

**Writing** scores earned since July 2012 are reported on a 6-point scale that rates that candidate's ability to compose an original essay suggesting a solution to a problem. The Writing Mean indicates an average of all scores earned during the 12 months prior to a test date.

**Note: "NA"** suggests that the indicated scores are not applicable for that test date. Because Verbal Ability is no longer included on the PCAT, a scaled score for this subtest is only reported if earned prior to July 2016, and percentile ranks are no longer reported. Writing scores earned prior to July 2012 are not displayed because they were reported on a 5-point scale for Conventions of Language and Problem Solving, which would make comparisons with the current scores misleading.

For suggestions regarding score interpretations and for information about the appropriate use of these test scores, please refer to the "Interpreting PCAT Scores" document available on the PCAT website: PCATweb.info

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 Scores based on normative data copyright © 2016 by NCS Pearson, Inc.

MMDDYY-XXXXXXXX-XXXXXX



Figure 8 Sample Official Transcript

## Transcript Service

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Pearson offers a service to colleges and schools of pharmacy that provides electronic data for all PCAT candidates who request that Official Transcripts be sent to a specific institution. This service allows schools to electronically consolidate all candidate transcript information and is available on an annual subscription basis for an annual fee, which covers all PCAT exams during one testing cycle (e.g., July, October, and January). Pearson provides these data by download from an SFTP site following each PCAT administration window.

To subscribe to this service, or for more information about the service, colleges and schools of pharmacy may contact PCAT Customer Relations by email at [Scoring.Services@Pearson.com](mailto:Scoring.Services@Pearson.com).

**Experimental Items**—Test items that do not count toward candidates' scores but are instead being field-tested to determine whether they can be used as operational items on future test forms. (*See* Operational Items.)

**Field Test**—An experimental administration of test items as a way to acquire examinee performance data in order to determine the items' suitability for use as future operational items.

**Item Response Theory (IRT)**—A mathematical model that relates the characteristics of test items and estimates of candidates' ability or proficiency to the probability of a positive response, such as the correct answer to an item.

**Mean (*M*)**—The average of a set of scores computed by adding all of the scores together and then dividing by the total number of scores.

**Normative Sample/Norm Group**—The group of individuals (sample) earning scores on a test whose score data are used to determine scaled scores and/or percentile ranks.

**Norm-Referenced Standardized Test**—A measurement through which an individual's scores are interpreted by comparing them to scores obtained by a defined group of individuals (a norm group or normative sample) who have been used to determine scaled scores and/or percentile ranks.

**Norms**—Data that summarize the performance of a norm group (or normative sample) by showing how earned scores compare to one another, such as by listing scaled scores and corresponding percentile ranks.

**Operational Items**—Items on a test that are used to determine candidates' scores.

**Percentile Rank (PR)**—A whole number between 1 and 99 that represents the proportion of individuals from the normative sample who earned lower than a given score on a test.

**Raw Score (RS)**—The number of items answered correctly by a candidate on a test.

**Scaled Score (SS)**—A standardized test score on a specified common scale (e.g., 200–600) with a designated mean and standard deviation that is derived from a raw score (or an ability estimate). Scaled scores are especially useful for comparing performance of individuals or groups over time in a content area (e.g., biology).

# References

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