I. Survey of the Natural Sciences (100 questions)

- Biology (40 questions)
  Cell and Molecular Biology, Diversity of Life; Biological Organization and Relationship of Major Taxa, Structure and Function of Systems, Developmental Biology, Genetics, Evolution, Ecology, and Behavior

- General Chemistry (30 questions)
  Stoichiometry and General Concepts, Gases, Liquids and Solids, Solutions, Acids and Bases, Chemical Equilibria, Thermodynamics and Thermochemistry, Chemical Kinetics, Oxidation-Reduction Reactions, Atomic and Molecular Structure, Periodic Properties, Nuclear Reactions, Laboratory

- Organic Chemistry (30 questions)
  Mechanisms: Energetics and Structure, Chemical and Physical Properties of Molecules, Stereochemistry (structure evaluation), Nomenclature, Individual Reactions of the Major Functional Groups and Combinations of Reactions to Synthesize Compounds, Acid-Base Chemistry, Aromatics and Bonding

II. Perceptual Ability (90 questions)

The Perceptual Ability Test is comprised of six subtests: 1.) apertures, 2.) view recognition, 3.) angle discrimination, 4.) paper folding, 5.) cube counting, and 6.) 3D form development

III. Reading Comprehension (50 questions)

The Reading Comprehension Test contains three reading passages on various scientific topics. Prior understanding of the science topics is not a prerequisite to an answer. The reading passages are grouped together and the questions are grouped together and refer to the same table, graph or other data presentation. Questions will be wide-ranging and based in empirical studies. Specific knowledge of these disciplines is not required for this section; all of the information you will need appears in the passages provided. Among the areas from which content is drawn are ethics and philosophy, cross-cultural studies, and population biology.

IV. Quantitative Reasoning (40 questions)

( Calculator available on screen) Mathematical Problems - Algebra (equations and expressions, inequalities, exponential notation, absolute value, ratios and proportions, and graphical analysis); Numerical calculations (fractions and decimals, percentages, approximations, and scientific notation); Conversions (temperature, time, weight, and distance); Probability and Statistics; Geometry; Trigonometry; Applied Mathematics (Word) Problems

Cost: $415

Length of exam: 3 hours and 45 minutes

GRADUATE RECORD EXAMINATION (GRE)

I. Analytical Writing

This section consists of two analytical writing tasks: a 30-minute "Analyze an Issue" task and a 30-minute "Analyze an Argument" task.

II. Verbal Reasoning

Verbal Reasoning has two sections, with 30 minutes and 20 questions per section. There are three types of questions:

- **Text Completion** — Tests the ability to reach a conclusion about how a passage should be completed on the basis of partial information.
- **Sentence Equivalence** — Tests ability to reach a conclusion about how a sentence should be completed, while focusing on the meaning of the whole sentence.
- **Reading Comprehension** — Tests abilities that are required to read and understand the kinds of prose encountered in graduate school.

III. Quantitative Reasoning

Quantitative reasoning has two sections, with 35 minutes and 20 questions per section. Skills, concepts and abilities are tested in geometry, arithmetic, algebra, and data analysis.

- **Quantitative Comparison** Asks you to compare two quantities and then determine if Quantity A is greater, Quantity B is greater, the two quantities are equal, or the relationship cannot be determined.
- **Multiple-Choice** — Some questions ask for one answer while others ask for one or more answers. A question may or may not specify the number of choices to select.
- **Data Interpretation** — Questions are grouped together and refer to the same table, graph or other data presentation. Questions ask you to interpret or analyze the given data.
- **Numeric Entry** — Answer entered as integer, decimal, or a fraction.

Cost: $195

Length of exam: 3 hours and 45 minutes

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey of the Natural Sciences</td>
<td>90 minutes</td>
</tr>
<tr>
<td>Perceptual Ability</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Reading Comprehension</td>
<td>60 minutes</td>
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</tbody>
</table>

Registration and more information available at:

http://www.ets.org/gre/
**Ophthalmology Admission Test (OAT)**

I. Survey of the Natural Sciences (100 questions)
- Biology (40)
  Cell and Molecular Biology, Diversity of Life: Biological Organization and Relationship of Major Taxa, Structure and Function of Systems, Developmental Biology, Genetics, Evolution, Ecology, and Behavior
- General Chemistry (30 questions)
  Stoichiometry and General Concepts, Gases, Liquids and Solids, Solutions, Acids and Bases, Chemical Equilibria, Thermodynamics and Thermochemistry, Chemical Kinetics, Oxidation-Reduction Reactions, Atomic and Molecular Structure, Periodic Properties, Nuclear Reactions, Laboratory
- Organic Chemistry (30 questions)
  Mechanisms: Energetics and Structure, Chemical and Physical Properties of Molecules, Stereochemistry (structure evaluation), Nomenclature, Individual Reactions of the Major Functional Groups and Combinations of Reactions to Synthesize Compounds, Acid-Base Chemistry, Aromatics and Bonding

II. Reading Comprehension (50 questions)
Contains three reading passages on various scientific topics. Prior understanding of the science topics is not a prerequisite to answering the test items. The reading passages require the ability to read, comprehend, and analyze thoroughly basic scientific information.

III. Physics (40 questions)
Units and vectors, linear kinematics, statics, dynamics, rotational motion, energy and momentum, simple harmonic motion, waves, fluid statics, thermal energy and thermodynamics, electrostatics, D.C. circuits, magnetism, optics, and modern physics.

IV. Quantitative Reasoning (40 questions)
Mathematical Problems - Algebra (equations and expressions, inequalities, exponential notation, absolute value, ratios and proportions, and graphical analysis); Numerical calculations (fractions and decimals, percentages, approximations, and scientific notation); Probability and Statistics; Geometry; Trigonometry; Applied Mathematics (Word) Problems

**Cost:** $390

**Length of exam:** 4 hours and 5 minutes

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**Pharmacy College Admission Test (PCAT)**

There are six content areas measured by the PCAT in seven separate subtests:
- The Verbal Ability section measures general, non-scientific word knowledge and usage using analogies and sentence completion. Analogies are 62% and sentence completion is 38% of this section.
- The Biology section measures knowledge of the principles and concepts of basic biology, including general biology, microbiology, and human anatomy and physiology. 50% of the questions are general biology, 20% microbiology, and 30% anatomy and physiology.
- The Chemistry section measures knowledge of principles and concepts of inorganic and elementary organic chemistry. 50% of the questions are general chemistry, 30% organic chemistry, and 20% biochemistry processes.
- The Reading Comprehension section measures ability to comprehend, analyze and evaluate reading passages on science-related topics. Comprehension is 30% of this section, Analysis 40%, and Evaluation 30%.
- The Quantitative Ability section measures skills in mathematical processes and the ability to reason through and understand quantitative concepts and relationships, including applications of basic math 15%, algebra 20%, probability and statistics 20%, pre-calculus 22%, and calculus 22%.
- One Written Essay section measure conventions of language skills in terms of sentence formation, usage and mechanics. All of the writing prompts state a problem involving a health issue, a science issue, or a social, cultural or political issue. Examinees are asked to present a solution to the problem in their essays.
- Experimental Items – Of the 48 items in each of the five multiple-choice subtests, 40 are core items that count towards your score and eight are experimental. One of the two writing subtests is also experimental. Experimental items are being tested for future use on PCAT test forms and will not affect your score.

**Cost:** $210

**Length of exam:** 4 hours

<table>
<thead>
<tr>
<th>Section</th>
<th>Questions</th>
<th>Time</th>
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<tbody>
<tr>
<td>Verbal Ability</td>
<td>40</td>
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<tr>
<td>Biology</td>
<td>48</td>
<td>35 minutes</td>
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<tr>
<td>Chemistry</td>
<td>48</td>
<td>35 minutes</td>
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<tr>
<td>Reading Comprehension</td>
<td>48 (6 passages)</td>
<td>50 minutes</td>
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<tr>
<td>Quantitative Ability</td>
<td>48</td>
<td>45 minutes</td>
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<tr>
<td>Written Essays</td>
<td>1</td>
<td>30 minutes</td>
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</tbody>
</table>

Registration and more information available at:
http://www.pcatweb.info
http://www.aacp.org/resources/student/pharmacyforyou/admissions/Pages/PCAT.aspx

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Xavier, Ph.D., M.S.P.H.
prehealth_education@tamucc.edu

Texas A&M University-Corpus Christi

College of Science and Engineering

HPAC

TAMU-CC

Fall 2017