





# Guide to the Use of Scores

### Inside, find all the facts you need about:

- the value of using GRE® scores
- test administration and scoring
- using and interpreting GRE scores
- statistical information
- GRE changes coming September 22, 2023 (see page 2)

2023-24

ets.org/gre/score-users

### **Communicating with the GRE® Program**

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By Email	gretests@ets.org	gre-info@ets.org
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To communicate by mail, both educators and test takers can send inquiries to this address:

GRE Program Educational Testing Service PO Box 6000 Princeton, NJ 08541-6000

### **GRE Test Changes**

### **GRE General Test**

Beginning on September 22, 2023, the testing time for the GRE General Test will be reduced and scores will be reported to test takers sooner. The number of questions in the Verbal Reasoning and Quantitative Reasoning sections will be reduced, and the number of writing tasks in the Analytical Writing section will be reduced from two to one. The unscored section will also be removed.

The test will continue to measure the same skills and constructs, and maintain the strong quality and security the GRE is known for, with valid and reliable scores for confident decision-making.

The score scales will remain the same. Care has been taken to maintain the technical properties of the score scales so that scores can continue to be used the same way for those who test before September 22, 2023, and those who test on or after September 22, 2023.

The score report and record layout of electronic data files will not change.

See page 6 for additional information.

### **GRE Subject Tests**

Beginning in September 2023, the GRE Subject Tests will be administered on computer. The tests will be offered more often in more locations, including in test centers worldwide and at home in most countries.

The testing time for the Physics Test and Psychology Test will be reduced from 2 hours and 50 minutes to 2 hours. The testing time for the Mathematics Test will continue to be 2 hours and 50 minutes.

The score scales will remain the same. Care has been taken to maintain the technical properties of the score scales so that you can continue to use the scores the same way for those who test before September 2023 and those who test beginning in September 2023.

See page 7 for additional information.

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### **Contents**

Introduction	4
Rooted in the ETS Mission	4
Benefits of Using GRE Scores in Admissions Decision Making	4
Using GRE Scores as Part of Holistic Admissions	5
About the GRE Tests	6
GRE General Test	6
GRE Subject Tests	7
Using GRE Scores	10
Validity	
Guidelines for Using GRE Scores	10
Score Interpretation Resources	
Considerations in Score Interpretation	13
Policies and Other Information	
Statistical Tables	17
GRE General Test Interpretive Data	17
GRE Subject Test Interpretative Data	19
Major Field Code List	21
GRE General Test Interpretive Data by Broad Graduate Major Field	26
Reliability and Standard Error of Measurement	30
Appendix A	33
GRE Analytical Writing Section Score Level Descriptions	33

**Attention GRE Score Users:** Make sure that you have access to the ETS® Data Manager, which helps GRE and TOEFL® score users access score reports online.

The ETS Data Manager is available through a secure online portal exclusively for official GRE and TOEFL score users. Institutions and organizations that have a GRE or TOEFL score reporting code can use the ETS Data Manager to access score information, test-taker data and more, free of charge. To learn more and request access to the ETS Data Manager for your institution, visit <a href="https://www.ets.org/institution-portal">www.ets.org/institution-portal</a>.

### Introduction

Thousands of graduate and professional school programs around the world, including business and law, use GRE test scores to successfully identify applicants who are academically prepared for graduate-level work and to help them enroll a diverse student body. That success is due, in part, to understanding what the GRE tests measure, how the tests are scored, the benefits and limitations of the tests, and how to use the tests within the context of a holistic admissions process.

The GRE Program is committed to providing information and guidance to help graduate programs achieve their goals, including enhancing diversity and inclusion. GRE tests and services help programs advise prospective students, create smart recruitment strategies, and evaluate and compare applicants.

### **Rooted in the ETS Mission**

The GRE tests were created over 70 years ago to have an objective lens through which all applicants could be compared, regardless of their background. Our dedication to fairness exemplifies nonprofit ETS's mission to help advance quality and equity in education for all people.

Today GRE General Test and/or a GRE Subject Test scores are used by admissions and fellowship panels to supplement undergraduate records, including grades and recommendations, and other qualifications for graduate-level study.

### Benefits of Using GRE Scores in Admissions Decision Making

The GRE General Test and GRE Subject Tests were designed to achieve a specific intended purpose that adds value to the admissions decision-making process. Understanding what the tests were designed to measure and predict can help administrators and faculty assign an appropriate role for the use of test scores, without over-relying upon them to accomplish more than they can.

### **Value of Using GRE Scores**

 The scores support institutions' efforts to identify which applicants are academically prepared for graduate-level study.

The GRE General Test measures skills that graduate and professional schools, including

business and law, have identified as necessary for academic success: verbal reasoning, quantitative reasoning, critical thinking and analytical writing. Institutions receive separate scores for each of the test's three sections, which allows graduate programs to place greater weight on some skills than others, if desired. Scores identify which potential students are likely to struggle academically in a particular skill, which can help programs prepare to offer extra support to help those students be successful. Some GRE Subject Tests also yield percent correct subscores that provide additional information about strengths and weaknesses, which can be useful to individuals and for evaluating strengths and weaknesses of an incoming cohort.

 The scores provide a common, objective measure to help programs compare students from different backgrounds.

Of all of the pieces of evidence institutions collect from applicants, only GRE scores are standardized and objective, giving faculty committees a way to directly compare applicants with different backgrounds and experiences. The GRE tests are also the only measures that are research based — developed in accordance with standards set by reputable institutions such as the American Educational Research Association (AERA), the National Council on Measurement in Education (NCME), and the American Psychological Association (APA) — and subject to extensive fairness guidelines, processes and reviews.

Other components submitted as part of an application package can be useful for the unique information they provide about a person's skills, experiences and attributes, but they are not standardized or objective, do not undergo a rigorous fairness review process and do not yield comparative data. Used alone, these measures can heighten the role that implicit bias plays in the review and selection processes and result in other unintended consequences that are potentially harmful to applicants and institutions. The clearest picture of an applicant — and the fairest admissions program — may be achieved by considering

both standardized and non-standardized measures.

### **Important Considerations**

 The scores do not and cannot offer insight about all of the qualities that are important in predicting academic success or in confirming undergraduate achievement.

The GRE tests are an important measure of academic readiness but cannot measure everything that an admissions committee would like to know about an applicant. Logically, it makes sense that a test designed to measure verbal reasoning, quantitative reasoning, critical thinking and analytical writing skills would not be the best indicator of how long it will take a student to graduate or how often that student will publish new research. A better place to find indicators of those types of outcomes might be in personal statements and letters of recommendation, which give applicants a platform for showing attributes like creativity, conscientiousness and perseverance, and to discuss their academic and work experiences.

 The scores need to be interpreted carefully because, like all tests, they are not exact measures.

All assessments have limitations that affect their ability to exactly measure a person's knowledge, skills and abilities. See guideline #3, on page 11, for more information.

### Using GRE Scores as Part of Holistic Admissions

### **Getting a Clearer Picture of Potential**

The graduate community has become increasingly interested in making changes to their admissions processes so that applicants are viewed more holistically. The holistic admissions method looks at multiple sources of information to get the fullest picture of each applicant's potential. By combining quantitative data like test scores and undergraduate GPA with more qualitative indicators such as letters of recommendation and work experience, you can be confident you have a more complete view of each applicant to fairly assess fit within your program.

The practice of using cut scores, especially one that uses GRE scores as the sole criteria, is contradictory to a holistic admissions process because it puts too much weight on one measure and does not allow applicants the opportunity to show other evidence of their potential value to the program. We recommend not using this type of practice.

### What Role Do GRE Scores Play?

GRE scores are essential in the holistic admissions process since only GRE tests provide a research-based, objective, directly comparable measure that institutions can use to fairly evaluate applicants from different backgrounds. A holistic admissions practice ensures that GRE scores have an appropriate role in the process, rather than an inflated role.

### **Resources to Help**

Although many people agree that applicants should be viewed holistically, challenges and constraints that admissions teams and faculty committees face — such as application volume, time, and financial and staff resources — make it difficult to initiate changes to long-standing processes and systems. To help, ETS is sharing a number of resources on its site, www.holisticadmissions.org, including a Holistic Admissions Digital Guide, diversity resources and fairness resources. Some of the resources were developed from in-person conversations with faculty and staff involved in admissions at 58 graduate programs across the United States in 2017, as well as an extensive review of related literature.

ETS offers a Holistic Admissions Master Class that is available free-of-charge for those involved in graduate admissions. This course provides insightful holistic admissions strategies and best practices from current and former graduate deans with years of boots-on-the-ground experience.

By revisiting program goals and aligning practices and processes with those goals, faculty committees can design an admissions process that fairly considers the multiple pieces of evidence that applicants submit to demonstrate their knowledge, skills and attributes and enrolls applicants with the best chances to be successful.

### **About the GRE Tests**

### **GRE General Test**

### **Test Content and Design**

The GRE General Test consists of three measures: Verbal Reasoning, Quantitative Reasoning, and Analytical Writing.

The Verbal Reasoning and Quantitative Reasoning measures of the GRE General Test are section-level adaptive. Overall, the first operational section of each measure is of average difficulty. The second operational section is administered based on a test taker's overall performance on the first section of that measure.

The test design provides a flexible test-taking experience that allows test takers to move freely within any timed section, skipping questions, changing answers, and using their own personal test-taking strategies.

An on-screen calculator is provided in the Quantitative Reasoning sections to reduce the emphasis on computation.

In the Analytical Writing section an elementary word processor developed by ETS is used so that individuals familiar with specific commercial word-processing software do not have an advantage or disadvantage. The software contains the following. This software contains the following functionalities: inserting text, deleting text, cut and paste and undoing the previous action. Tools such as a spelling checker and grammar checker are not available in the ETS software.

Individuals who are interested in reviewing the content of the General Test can download a *POWERPREP* Online practice test free-of-charge.

### Test Structure on or after September 22, 2023

The GRE General Test administered beginning on September 22, 2023, contains:

- one Analytical Writing section with one 30minute task
- two Verbal Reasoning sections (one 18-minute section with 12 questions and one 23-minute section with 15 questions)
- two Quantitative Reasoning sections (one 21minute section with 12 questions and one 26minute section with 15 questions)

Total testing time is approximately 1 hour and 58 minutes.

### Test Structure before September 22, 2023

The GRE General Test administered before September 22, 2023, contains:

- one Analytical Writing section with two separately timed 30-minute tasks
- two 30-minute Verbal Reasoning sections (with 20 questions each)
- two 35-minute Quantitative Reasoning sections (with 20 questions each)
- a 30-35 minute unidentified unscored section containing questions being pretesting for future use. Answers to pretest questions are not used in the calculation of scores for the test.

Total testing time is approximately 3 hours and 45 minutes.

#### Skills Assessed on the General Test

The **Verbal Reasoning** measure assesses the ability to:

- analyze and draw conclusions from discourse and reason from incomplete data
- understand multiple levels of meaning, such as literal, figurative and author's intent
- summarize text and distinguish major from minor points
- understand the meanings of words, sentences and entire texts
- understand relationships among words and among concepts

In each test edition, there is a balance among the passages across three different subject matter areas: humanities, social sciences (including business) and natural sciences. There is an emphasis on complex reasoning skills.

The **Quantitative Reasoning** measure assesses the ability to:

- understand, interpret and analyze quantitative information
- solve problems using mathematical models
- apply the basic concepts of arithmetic, algebra, geometry and data analysis

There is an emphasis on quantitative reasoning skills.

The **Analytical Writing** measure assesses critical thinking and analytical writing skills, including the ability to:

- articulate complex ideas clearly and effectively
- support ideas with relevant reasons and examples
- sustain a well-focused, coherent discussion
- control the elements of standard written English

The measure does not assess specific content knowledge and there is no single best way to respond.

#### **Test Administration**

The GRE General Test is administered on computer at more than 1,000 ETS-authorized test centers in more than 160 countries. The test is given in a secure testing environment and, in most regions of the world, is available on a continuous basis. In Mainland China; Hong Kong, China; Taiwan, China; and Korea, the test is offered one to three times per month.

The GRE General Test can also be taken at home. It is taken on the test taker's own computer at home in most locations around the world. The at home test is the same valid and reliable GRE General Test you know and trust, and is identical in content, format and onscreen experience to the GRE General Test taken at a test center. Students can prepare for the test using the same prep materials. Only the delivery method has changed.

### How the Sections of the GRE General Test are Scored

### Verbal Reasoning and Quantitative Reasoning Sections

Scores on the Verbal Reasoning and Quantitative Reasoning measures depend on performance on the questions given and on the number of questions answered in the time allotted. The Verbal Reasoning and Quantitative Reasoning measures of the GRE General Test are section-level adaptive. This means the computer selects the second section of a measure based on the performance on the first section. Within each section, all questions contribute equally to the final score.

A raw score is computed for each of the two measures. The raw score is the number of questions answered correctly.

The raw score for each measure is converted to a scaled score through a process known as equating. The equating process accounts for minor variations in difficulty among the different test editions as well as differences in difficulty among individuals' tests introduced by the section-level adaption. Thus, a given scaled score for a particular measure reflects the same level of performance regardless of which second section was selected and when the test was taken.

Verbal Reasoning and Quantitative
Reasoning scores are reported on 130 to 170
score scales, in one-point increments. If no
answers are given for a measure, an NS (No
Score) is reported for that measure. **Note that**the score scales remain the same for the
shorter GRE, to ensure there is no
interruption for institutions in their
admissions processes.

The scales for the Verbal Reasoning and Quantitative Reasoning measures were developed in fall 2011. When the scales were set, the scale means were adjusted so that the full year mean for both measures would be equal to 150 and the standard deviation equal to 8.75.

### **Analytical Writing Section**

Analytical Writing essay responses are evaluated on a 6-point holistic scale, including receiving a score from the e-rater® scoring engine, a computerized program developed by ETS that is capable of identifying essay features related to writing proficiency. In holistic scoring, scores are assigned on the basis of the overall quality of an essay in response to the assigned task.

A single score is reported for the Analytical Writing measure. Score Level Descriptions that describe, for each score level, the overall quality of analytical writing demonstrated on the Analytical Writing measure are presented in Appendix A, on page 33.

### **GRE Subject Tests**

#### **Test Content**

Subject Tests measure achievement in specific subject areas and assume undergraduate majors or extensive background in those disciplines. Brief

descriptions of the three Subject Tests – Mathematics, Physics and Psychology – follow. (Note that the Chemistry Test was discontinued in May 2023; scores will continue to be reportable for 5 years after the test date.)

Each Subject Test is developed and updated regularly by a committee of examiners who are actively teaching in the field. Departments are encouraged to periodically review the test content description in order to verify the appropriateness of the content for their programs. Individuals who are interested in reviewing the content of a particular Subject Test can download, free-of-charge, copies of the corresponding Fact Sheet and/or Subject Test practice book.

#### **Mathematics**

The test consists of approximately 66 questions, drawn from courses commonly offered at the undergraduate level. Approximately 50 percent of the questions involve calculus and its applications—subject matter that can be assumed to be common to the backgrounds of almost all mathematics majors. About 25 percent of the questions in the test are in elementary algebra, linear algebra, abstract algebra, and number theory. The remaining 25% of the questions deal with other areas of mathematics currently studied by undergraduates at many institutions, including discrete mathematics and algorithmic processes, differential equations, topology and modern geometry, complex analysis, probability and statistics, logic and foundations and numerical analysis.

### **Physics**

The test consists of approximately 70 questions, based on such materials as diagrams, graphs, experimental data, and descriptions of physical situations. There is increased emphasis on the understanding of fundamental theoretical principles of physics. Topics include classical mechanics (20%), electromagnetism (18%), optics and wave phenomena (8%), thermo-dynamics and statistical mechanics (10%), quantum mechanics (13%), atomic physics (10%), special relativity (6%) and laboratory methods (6%). The remaining 9% of the test covers specialized topics such as nuclear and particle physics, condensed matter physics and astrophysics.

For test editions administered beginning in September 2023, three percent correct

subscores are reported: (1) Classical Mechanics, (2) Electromagnetism, and (3) Quantum Mechanics and Atomic Physics.

For test editions administered between April 2021 and April 2023, three subscores are reported: (1) Classical Mechanics, (2) Electromagnetism, and (3) Quantum Mechanics and Atomic Physics.

### **Psychology**

The test consists of approximately 144 questions that are drawn from the core of knowledge most commonly encountered in courses offered at the undergraduate level within the broadly defined field of psychology. A question may require recalling factual information, analyzing relationships, applying principles, drawing conclusions from data, and/or evaluating a research design.

For test editions administered beginning in September 2023, questions are distributed between six subscore areas: Biological (30 questions), Cognitive (29 questions), Social (19 questions), Developmental (18 questions), Clinical (23 questions), and Measurement/ Methodology/ Other (25 questions).

For test editions administered prior to September 2023, questions are distributed between six subscore areas: Biological (17-21%),

Cognitive (17-24%), Social (12-14%), Developmental (12-14%), Clinical (15-19%), and Measurement/ Methodology/Other (15-19%).

### **Test Administration**

Beginning in September 2023, GRE Subject Tests will be administered on computer at test centers worldwide on the following dates:

- September 25, 2023, through October 8, 2023
- October 24, 2023, through November 6, 2023
- April 7, 2024, through April 20, 2024

At home testing will also be offered in most locations.

Testing time for the Mathematics Test is 2 hours and 50 minutes. Testing time for the Physics and Psychology Tests is 2 hours.

### **How the GRE Subject Tests are Scored**

Each score on a Subject Test depends on the number of questions answered correctly in the

time allotted. The number of questions answered correctly is converted to a scaled score through a process known as equating. The equating process accounts for minor variations in difficulty among the different test editions.

Every Subject Test yields a total score on a 200 to 990 score scale, in 10-point increments. Note that each of the individual test scales occupies only a portion of the 200 to 990 score range.

Beginning in September 2023, the Physics and Psychology Tests will yield percent correct subscores. Percent correct scores are reported on a range from 0 to 100 percent and indicate the percentage of questions the test taker answered correctly within a particular content area.

Note that percent correct scores from one test edition cannot be compared with percent correct scores on other test editions because these scores are not equated. For example, a Classical Mechanics percent correct score of 80 on one Physics Test edition is not equivalent to a Classical Mechanics percent correct score of 80 on another Physics Test edition. Percent correct subscores enable the assessment of strengths and weaknesses and can be which can be useful to individuals and for evaluating strengths and weaknesses of an incoming cohort.

For Physics and Psychology Tests taken prior to September 2023, equated subscores are reported on a range from 20 to 99, in one-point increments. Subscores are scaled through a process known as equating, which accounts for minor variations in difficulty among the different test editions.

For each test, the number of questions answered correctly that belong to each content area and the number of questions answered correctly on the whole test both contribute to each equated subscore. In most cases, questions that belong to a content area also require some ability in other content areas. By using the number of correct answers on the whole test in the computations of each subscore, the responses to the questions that belong to other content areas are allowed to contribute and the quality of the equated subscore is enhanced.

Note that the equated subscore scales for each of the individual Subject Tests occupy only a portion of the 20 to 99 score range. Equated subscores enable the assessment of strengths and weaknesses and can be used for guidance and placement purposes.

### **Using GRE Scores**

### **Validity**

Validity research is essential to verify that the GRE General Test and GRE Subject Test scores are valid for any intended use. ETS and numerous external parties<sup>1</sup> have conducted validity research to verify that it is appropriate to use GRE scores for graduate and professional school admissions, including business and law; fellowship selection and guidance; and counseling for graduate study.

Departments and programs using GRE scores for these purposes may wish to conduct their own studies to collect validity information. ETS researchers will provide advice on the design of appropriate validation studies without charge. For additional assistance, contact <a href="mailto:gretests@ets.org">gretests@ets.org</a>.

GRE scores may be appropriate for purposes other than those described above, but it is important for the user to validate the use of scores for those purposes.

### **Guidelines for Using GRE Scores**

GRE scores are typically used to make decisions that affect people's educational and career paths, so all score users have an obligation to adhere to published GRE Program guidelines. Departments and programs have a responsibility to ensure that all score users are aware of the GRE guidelines, monitor the use of scores, and correct any instances of misuse. The GRE Program staff are available to assist institutions in resolving score-misuse issues.

The following guidelines provide information about the appropriate use of GRE test scores for those who use the scores in graduate and professional school admissions, including business and law, for fellowship selection processes and for guidance and counseling for graduate-level study. Adhering to these guidelines can help protect applicants and programs from unfair decisions that may result from inappropriate uses of scores.

### Use Multiple Sources of Information When Making Decisions

GRE scores have an important role in the admissions process because they serve as a

common, objective measure to compare students from different backgrounds. However, no single test or source of information can provide all the information that a decision-maker would like to know about an applicant. Therefore, it is important to use multiple sources of information during the decision-making process to ensure fairness and to balance the limitations of any single measure of knowledge, skills or abilities.

Undergraduate grade point average, letters of recommendation, personal statement, samples of academic work and professional experience can also have an important role in the admissions process because they can be sources to learn about other desired experiences and applicant attributes, such as perseverance, integrity and work ethic.

Using a minimum GRE score as the only criterion for denial or acceptance for admission or a fellowship award is not good practice because it overinflates the role of one measure of an applicant's value over others.

To ensure that all applicants have the opportunity to show evidence of the value they would bring to a program, ETS supports institutions' efforts to move toward a holistic admissions approach, in which every component of an applicant's application package is evaluated for evidence that the applicant is a good fit for a program.

# 2. Consider Verbal Reasoning, Quantitative Reasoning and Analytical Writing Scores as Three Separate and Independent Measures

Although all students in graduate and professional programs, including business and law, would benefit from having ability in verbal reasoning, quantitative reasoning and analytical writing, the skill level required for success in each of these three areas is unique to each program. Some programs may require a higher level of skills in one area but place less emphasis on skills in another area. For this reason, ETS

*Examinations*: Implications for graduate student selection and performance. *Psychological Bulletin*, 127 (1), 162-181.

<sup>&</sup>lt;sup>1</sup> Kuncel, N. R., Hezlett, S. A. and Ones, D. S. (2001). A comprehensive meta-analysis of the predictive validity of the *Graduate Record* 

encourages programs to consider Verbal Reasoning, Quantitative Reasoning and Analytical Writing scores as three separate and independent measures.

### 3. Interpret GRE Scores Carefully Because, Like All Assessments, They Are Not Exact Measures

Errors of measurement occur when a test taker performs differently on one occasion or test edition than on another for reasons that may or may not be related to the purpose of the test. A test taker may try harder, be more (or less) tired or anxious compared to some other occasion, have greater familiarity with the content of questions on one test edition than on another test edition, or simply guess more questions correctly on one occasion than on another. These reasons for inconsistency are generally referred to as errors of measurement.

For both the GRE General Test and Subject Tests, the Standard Error of Measurement (SEM) for individual scores reported in Tables 4A-4D provide an easy way to account for measurement error. For example, consider a test taker who obtained a GRE Quantitative test score of 153. According to Table 4A, the SEM for individual scores for the GRE Quantitative Reasoning measure is 2.2, which means that we can be 68% confident that the test taker's true score would be between 151 and 155. For 95% confidence, we can double the SEM of individual scores; that is we can be 95% confident that the test taker's true score would be between 149 and 157.

### 4. Understand What Score Differences are Meaningful When Evaluating Applicants

Different scores among test takers may not reflect significant differences in abilities. As described in guideline #3 above, every test has measurement error. It is important for a decision-maker to know whether the differences between two scores is meaningful.

The SEM for score differences provides an easy way to account for measurement error and can serve as a reliable indication of real differences in applicants' academic knowledge and developed abilities. For example, in Table 4A, the SEM of score differences for the Quantitative Reasoning measure is 3.1, which means that if there is a score difference of 3.1 points or more between two test takers' Quantitative Reasoning scores, we can be 68%

confident that the score differences are meaningful. For 95% confidence, we can double the SEM of score differences; that is, if there were a score difference of 6.2 points or more points between two test takers' Quantitative Reasoning scores, we can be 95% confident that the score differences are meaningful.

### 5. Use the Appropriate Percentile Ranks when Comparing Candidates

Percentile ranks can provide more information about an individual's performance relative to the performance of other people who took a test in a given time period (called the reference group). Percentile ranks indicate the percent of test takers in the reference group who obtained scores below a specified score. For example, a percentile rank of 70% indicates that the test taker performed better than 70% of the test takers within the reference group.

Percentile ranks for GRE tests may change over time because they are always based on the population of test takers who took the test within a given three-year period. Thus, when two or more applicants are being compared, the comparison should always be made on the basis of the most recent percentile rank tables available at <a href="https://www.ets.org/gre/scoreresources">www.ets.org/gre/scoreresources</a>.

### 6. Subject Test Scores and Percentile Ranks Should Only Be Compared with Other Scores and Percentile Ranks on the Same Subject Test

Subject Test scores should only be compared with other scores on the same Subject Test because each Subject Test is scaled separately. For example, a 680 on the Physics Test is not equivalent to a 680 on the Mathematics Test.

In addition, Subject Test percentile ranks should only be compared with other percentile ranks on the same Subject Test because the percentile ranks for each Subject Test are based on a different reference population. For example, a 79<sup>th</sup> percentile rank on the Physics Test is not equivalent to a 79<sup>th</sup> percentile on the Mathematics Test.

## Appropriate and Inappropriate Uses of GRE Scores and Uses Without Supporting Validity Evidence

ETS supports the use of GRE scores for purposes supported by validity evidence and advises

against using GRE scores for purposes that have not been supported by validity evidence.

### **Appropriate Uses**

Provided that the aforementioned guidelines are adhered to — particularly Guideline #1, using multiple sources of information in the decision-making process — General Test and Subject Test scores are suitable for the following uses:

- Selection of applicants for admission to graduate-level programs
- 2. Selection of graduate fellowship applicants for awards
- 3. Guidance and counseling for graduate study

Departments and programs using GRE scores for these purposes may wish to conduct their own studies to collect validity information. ETS researchers will provide advice on the design of appropriate validation studies without charge. For additional assistance, contact <a href="mailto:gretests@ets.org">gretests@ets.org</a>.

Programs interested in using Subject Test scores as a factor in awarding undergraduate credit may do so in the field of the test. However, such programs need to develop a rationale that clearly describes the relationship between GRE Subject Test scores and the amount of credit awarded, and make this rationale available to users of transcripts that contain credit awarded in this manner.

#### **Inappropriate Uses**

Uses and interpretations of General Test and Subject Test scores without supporting validity evidence are inappropriate, including the following:

- Requirement of a minimum score on the General Test for conferral of a degree, creditby-examination, advancement to candidacy or any non-educational purpose
- Requirement of scores on the General Test or Subject Tests for employment decisions, including hiring, salary, promotion, tenure or retention
- 3. Use of the Verbal Reasoning, Quantitative Reasoning or Analytical Writing measures as an outcomes assessment

### Uses without Supporting Validity Evidence

Should an institution wish to use GRE scores for purposes other than the "Appropriate Uses" listed above, please consult with GRE Program staff regarding the goals and how GRE scores are envisioned to help achieve those goals. If it is determined that there is no validity evidence to support the intended use, ETS researchers can offer advice on the design of a validity study, or they may be able to suggest alternate ways for the institution to achieve its goals. ETS's objective is always to protect test takers and programs from unintended consequences and unnecessary risks due to score misuse. Please contact <a href="mailto:gretests@ets.org">gretests@ets.org</a> with any questions about the appropriate use of scores.

### Confidentiality and Authenticity of GRE Scores

GRE scores are confidential and should not be released by an institutional recipient without the explicit permission of the test taker. **GRE scores should not be included in academic transcripts or other documents sent outside the institution.** Dissemination of score records should be kept at a minimum, and all staff who have access to them should be advised of the confidential nature of the scores.

To ensure the authenticity of scores, the GRE Program urges that institutions accept only official reports of GRE scores received directly from ETS. The only official reports of GRE scores are those issued by ETS and sent directly to approved institutions and organizations designated by the test takers and to vendors the score recipients might designate to process the scores they receive. Scores obtained from other sources should not be accepted. If there is a question about the authenticity of a score report, the question should be referred to ETS. ETS will verify whether an official report was issued and the accuracy of the scores.

### **Encouragement to Report Score Ranges Rather than Average Scores**

Test takers may want to know what test scores they need to achieve to be considered for a particular program and will likely look for signs of a score requirement or average on a school website or rankings list. Reporting an average test score may cause an applicant to self-select out of applying for a program or scholarship for which

the applicant may have been considered. For this reason, the GRE Program strongly urges that departments and programs report GRE scores in ranges, such as the highest and lowest scores of the middle 50 percent of the admitted applicants and avoid reporting a precise mean, median, or minimum score. Presenting score ranges emphasizes the diversity of individual scores for any one graduate department or program.

### **Score Interpretation Resources**

The GRE Program provides GRE interpretive data and resources to assist graduate and professional schools, including business and law, in using scores for admissions purposes. Resources include GRE interpretative data and information, the ETS Data Manager and the GRE Comparison Tool for Law Schools. For more information about these resources, visit <a href="https://www.ets.org/gre/scoreresources">www.ets.org/gre/scoreresources</a>.

### Considerations in Score Interpretation

Officials responsible for admissions at each institution must determine the significance of GRE scores in relation to other components of an applicant's file. Considering students holistically ensures a fairer admissions process for everyone and is important to ensure that all applicants have the opportunity to present multiple aspects of their potential value to the program. Programs that are not able to do a full holistic file review for all applicants should pay special attention to applicants who may have had experiences somewhat different from those of the traditional majority as discussed below.

### **Test Takers from Underrepresented Groups**

On average, members of different racial, ethnic and economic backgrounds perform differently on standardized tests. These differences do not necessarily mean that tests are biased. Extensive research by ETS and other organizations has shown that these performance differences can be the result of a number of factors, such as variation in course-taking patterns, interests, knowledge and skills, or differential educational, economic and social systems in which everyone does not receive equal opportunity. These score differences are seen in all standardized tests.

Despite the extensive work that ETS does to ensure that the GRE tests are as free from bias as possible, disparities in performance among

underrepresented groups still exist. A review of all components of an applicant's file, in which GRE scores are considered as one piece of information among many, enables each applicant to be evaluated as fairly as possible.

Learn more about the <u>scores of test takers from underrepresented groups</u>. Performance information for underrepresented groups can be found in the publication entitled <u>A Snapshot of the Individuals Who Took the GRE General Test</u>. For information about ETS's extensive efforts to ensure that the GRE tests are as free from bias as possible, visit the <u>GRE Test Fairness and Validity</u> page. More information about <u>ETS's policy work to reduce achievement gaps</u> is also available.

### **Test Takers Who are Nonnative English Speakers**

Although the GRE tests are not designed to assess English-language proficiency (ELP), they measure skills important for graduate and professional education at institutions where the language of instruction is English. Considering GRE and ELP test scores (such as *TOEFL*\* scores) together will enable score users to determine if English proficiency may have affected an applicant's performance on the GRE tests.

Test takers whose native language is not English often find the Analytical Writing section more challenging than native speakers of English. ETS takes steps to ensure that these performance differences are not due to differences on the crosscultural accessibility of the prompts.

- Fairness reviews occur for all prompts to ensure that the content and tasks are clear and accessible for all groups of test takers, including students whose native language is not English.
- Scorers are trained to focus on the analytical logic of the essays more than on spelling, grammar or syntax.
- The mechanics of writing are weighed in their ratings only to the extent that these errors impede clarity of meaning.

Since the Analytical Writing measure is tapping into different skills than the Verbal Reasoning measure, it may not be surprising that the strength of performance of individuals whose native language is not English differs between the Analytical Writing measure and the Verbal Reasoning measure. Given that graduate faculty have indicated that analytical writing is an important component of work in most graduate

schools, including the Analytical Writing measure should increase the validity of the General Test.

Score users should be aware that the GRE Analytical Writing measure and the TOEFL Writing measure assess different skills and scores on the two tests are not comparable. The GRE Analytical Writing measure is designed to measure critical thinking and analytical writing skills. The TOEFL Writing measure emphasizes fundamental writing skills as well as the ability to organize and convey, in writing, information that has been understood from spoken and written text. Because the TOEFL test emphasizes fundamental writing and comprehension skills, the TOEFL score can supplement an Analytical Writing score by helping faculty determine whether a low score on the GRE Analytical Writing measure is due to lack of familiarity with English or lack of ability to produce and analyze logical arguments.

To learn more about the TOEFL test, visit www.ets.org/toefl. Further information regarding the scores of test takers who are nonnative English speakers is also available.

### **Test Takers with Disabilities**

ETS provides accommodations for individuals with disabilities or health-related needs and works continuously to ensure that as new technologies become available, ETS's offerings evolve. Individuals who have currently documented visual, physical, hearing or learning disabilities and are unable to take the tests under standard conditions can apply for accommodations, which include extended testing time, extra breaks, screen magnification, screen readers and more.

The accommodations offered are intended to minimize any adverse effect that the individual's disability might have upon test performance and to help ensure that, insofar as possible, the resulting scores represent their educational achievement. Reviewing an applicant's entire file will provide more information about the individual's ability to succeed in a graduate program than any one test can provide.

Learn more about accommodations available for test takers with disabilities or health-related needs at www.ets.org/gre/disabilities.

#### **Test Takers Who Retest**

Test takers may take a GRE test more than once. There are several ways in which graduate departments and programs can judge multiple scores for an applicant (e.g., use most recent score, use highest score, use average score). Whatever approach is adopted, it is best to use it consistently with all applicants.

### **Essay Responses on the Analytical Writing Section**

While all GRE General Test score reports contain an Analytical Writing score, score users who have access to the ETS Data Manager can also view test takers' actual essay responses.

A GRE Analytical Writing essay response can be considered a rough first draft since test takers do not have time to fully revise their essays during the test. Individuals taking the computer-delivered test do not have spell-checking or grammar-checking software available to them.

Essay responses at computer-delivered administrations are typed, while essay responses at paper-delivered administrations are handwritten. Typed essays often appear shorter than handwritten essays; handwritten essays can appear to be more heavily revised than typed essays. GRE readers are trained to evaluate the content of essays and to give the same score to a handwritten essay as they would to its typed version of the same quality.

To learn more and request access to the ETS Data Manager for your institution, visit <a href="https://www.ets.org/portal">www.ets.org/portal</a>.

### **Policies and Other Information**

### **Score Reporting Policies**

With the ScoreSelect® option, test takers who retake a GRE test can decide which GRE scores to send to designated institutions. This option is available for both the GRE General Test and the GRE Subject Tests and can be used by anyone with reportable scores from the last five years. Scores for a test administration must be reported in their entirety. Institutions receive score reports that show the scores that test takers selected to send to them.

There are no special notations to indicate whether or not other GRE tests have been taken.

GRE score reporting policies have been developed to encourage the appropriate use of

GRE scores and to protect the right of individuals to control the distribution of their own score reports. Scores are reportable for five years following the individual's test date. Departments and programs are advised not to use scores that are older than five years due to changes in ability that may occur over extended periods of time.

Score reports are sent to test takers and to institutions of higher education granting baccalaureate or higher degrees, to approved graduate fellowship-granting sponsors designated by the test takers and to vendors the score recipients might designate to process the scores they receive. Score reports are also available to approved GRE score recipients in the ETS Data Manager. For more information, visit www.ets.org/portal.

We have reduced the score delivery time frame for test takers from 10-15 days to 8-10 days after the test date. Score users may also receive scores faster than 10-15 days depending upon which delivery method they have chosen. Electronic scores are delivered to schools twice a week.

Score reports for the GRE Subject Tests are sent to institutions and available in the ETS Data Manager approximately five weeks after the test date.

### **Revising Reported Scores**

ETS routinely follows extensive review and quality control procedures to detect and avoid flawed questions and consequent errors in scoring. Nonetheless, occasionally an error is discovered after scores have been reported. Whenever this happens, the specific circumstances are reviewed carefully, and a decision is made about how best to take corrective action that is fairest to all concerned. Revised scores reported during the current year are reported directly to graduate, business and law schools and graduate fellowship sponsors as well as to students because such scores are likely to be part of current applications for admission. Revisions to scores reported in the previous five years are sent to the affected students, who may request that ETS send the revised scores to any graduate and professional schools or fellowship sponsors still considering their applications.

#### **Confidentiality of Information**

The GRE Program recognizes the right of institutions as well as individuals to privacy with regard to information supplied by and about them. ETS therefore safeguards from unauthorized disclosure all information stored in its data or research files. Information about an institution (identified by name) will be released only in a manner consistent with a prior agreement, or with the consent of the institution.

### **Protecting the Integrity of GRE Tests**

ETS has developed and continues to refine its threepronged approach of prevention, detection and communication over its 75-year history as the world's largest nonprofit educational measurement and research organization. Many of the test security practices pioneered by ETS have become the industry standard and have been adopted by other companies and organizations around the world.

The ETS Office of Testing Integrity constantly monitors testing, investigates security issues, conducts unannounced audits and works to ensure score validity worldwide. ETS spends over \$50 million annually on security for at home testing, test center operations, test-taker identification and monitoring, internet security, proctor and supervisor training, final score reporting, and post-testing analytics.

ETS has procedures in place to prevent testing and scoring fraud. These can be seen from the test design right through to the score reporting process, including using the highest standards to create and deliver test content, establishing secure test locations, ensuring the training of test center administrators, instituting and enforcing test-taker rules and requirements, and maintaining the quality of scoring and score reporting through extensive training of GRE raters, as well as security measures implemented for the paper score reports.

In the GRE General Test at home option, ETS employs multiple best-in-class security measures that use both real-time human monitoring and artificial intelligence technology to see and respond to even the hardest-to-detect incidents:

 Live proctors will ensure constant vigilance, including confirming the test taker's identity and scanning their home environment before testing begins, flagging any suspicious activity, and intervening if necessary.  Artificial Intelligence (AI) technology — such as facial recognition, gaze tracking and video recording of the entire session — will guard against malicious activity. Examples of test taker activities that AI will flag as possible cheating incidents include attempts to impersonate another test taker, attempts to open a new browser, run unpermitted software and use unpermitted objects, such as a cell phone during the test administration and breaks.

In addition, ETS is vigilant in identifying and taking action against fraudulent activity. All reported incidents of fraud are taken seriously and investigated thoroughly by the ETS Office of Testing Integrity. Statistical analysis methods are also used to help ensure that valid scores are reported. The ETS Psychometric Analysis and Research team monitors score trends by test center, country and region and reports any suspicious anomalies to the Office of Testing Integrity for review. In terms of communication, ETS will continue to inform institutions that are designated score recipients when scores have been cancelled. In addition, any concerns regarding test results can be reported to ETS and will be investigated.

### **Cancellation of Scores by ETS**

ETS strives to report scores that accurately reflect the performance of every test taker. Accordingly, ETS's standards and procedures for administering tests have three primary goals:

- giving test takers equivalent opportunities to demonstrate their abilities
- preventing any test takers from gaining an unfair advantage over others
- providing score users with valid scores

To promote these objectives, ETS reserves the right to review questionable test scores which may delay expected score reporting time frames, cancel any test scores with forfeiture of test fees, whether or not it has already been reported, and to take such other actions as ETS deems appropriate, including banning the test taker from taking any future ETS tests and referring the matter to law enforcement authorities and government agencies including but not limited to immigration departments, when, in ETS's judgment, a testing irregularity occurs; there is an

apparent discrepancy in a test taker's identification; the test taker may have engaged in misconduct, including without limitation having someone else take the test for them, obtaining improper access to test questions or answers, disclosing test questions or answers to third parties, plagiarism, or copying or communication; or the score is invalid for another reason.

ETS reserves the right to share any and all information in its possession about a test taker and the terms and conditions of test taking with any third party, including but not limited to (a) any entity which ETS recognizes as an authorized user of test scores, including without limitation any entity to which ETS reports test scores at the test taker's request, and (b) any government agency with responsibility for administration or enforcement of U.S. criminal and/or immigration laws. When ETS cancels a test score that has already been reported, it notifies score recipients that the score has been canceled and may also explain why the score has been canceled.

For additional security questions, or concerns, please contact the ETS Office of Testing Integrity by email at <a href="mailto:CommunicateTestSecurity@ets.org">CommunicateTestSecurity@ets.org</a>, or by phone at 1-800-750-6991 (United States, U.S. Territories, and Canada) or 1-609-406-5430 (all other locations).

For additional information about cancellation of scores by ETS, view the <u>GRE</u> Information Bulletin.

### **Statistical Tables**

### **GRE General Test Interpretive Data**

To help interpret scaled scores, the GRE Program describes scores in terms of their standing in appropriate reference groups. Table 1A provides summary statistics for this reference group for each of the three GRE General Test measures: means and standard deviations of scaled scores, and number of test takers. The table is based on all individuals who tested between July 1, 2019, and June 30, 2022. Test takers who received a No Score (NS) on a specific measure are excluded from the data reported in that specific measure's accompanying tables.

Although each GRE General Test measure assesses different developed abilities, scores on the measures are moderately related. The correlation between Verbal Reasoning and Quantitative Reasoning scores is .40, the correlation between Verbal Reasoning and Analytical Writing scores is .56, and the correlation between Quantitative Reasoning and Analytical Writing scores is .05.

**Table 1A: Performance Statistics on the GRE General Test** 

(Based on the performance of all individuals who tested between July 1, 2019, and June 30, 2022)

Test	Number of Test Takers	Mean	Standard Deviation
Verbal Reasoning Measure	1,185,163	150.94	8.48
Quantitative Reasoning Measure	1,187,394	155.44	9.78
Analytical Writing Measure	1,182,875	3.56	0.88

Note: A total of 53 percent of test takers indicated they were female, 47 percent indicated they were male, and less than 1 percent did not provide any classification with regard to gender.

Tables 1B and 1C provide percentile ranks (i.e., the percentages of test takers in a group who obtained scores lower than a specified score) for the GRE General Test measures. The tables are based on all individuals who tested between July 1, 2019, and June 30, 2022.

### Table 1B: GRE Verbal Reasoning and Quantitative Reasoning Interpretative Data Used on Score Reports

(Percent of test takers scoring lower than selected scaled scores. Based on the performance of all individuals who tested between July 1, 2019, and June 30, 2022<sup>a</sup>)

Scaled Score	Verbal Reasoning	Quantitative Reasoning
170	99	94
169	99	91
168	98	87
167	97	83
166	96	80
165	95	76
164	94	73
163	92	70
162	89	68
161	87	65
160	84	61
159	81	58
158	77	55
157	73	52
156	70	49
155	65	46
154	60	42
153	56	39
152	50	36
151	46	33
150	41	30
149	36	27
148	32	24
147	29	21
146	25	18
145	22	15
144	19	13
143	17	11
142	15	9
141	12	7
140	10	6
139	9	5
138	7	4
137	6	3
136	5	2
135	4	1
134	3	1
133	2	1
132	2	
131	1	
130		

### Table 1C: GRE Analytical Writing Interpretative Data Used on Score Reports

(Percent of test takers scoring lower than selected score. Based on the performance of all individuals who tested between July 1, 2019, and June 30, 2022<sup>a</sup>)

Score Levels	Analytical Writing
6.0	99
5.5	98
5.0	91
4.5	81
4.0	56
3.5	38
3.0	15
2.5	7
2.0	2
1.5	1
1.0	
0.5	
0.0	

**Note for Tables 1B and 1C:** Blank cells imply that percentile information was not reported because there were no test takers above or below specified scale score range.

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<sup>&</sup>lt;sup>a</sup> A total of 1,185,163 test takers took the Verbal Reasoning measure, 1,187,394 took the Quantitative Reasoning measure, and 1,182,875 took the Analytical Writing measure between July 1, 2019, and June 30, 2022.

### **GRE Subject Test Interpretative Data**

### **Subject Test Total Score Information**

To help interpret scaled scores, the GRE Program describes scores in terms of their standing in appropriate reference groups. Table 2A provides summary statistics for each of the GRE Subject Tests, including number of test takers, mean and standard deviation of scaled scores, and percent of the group by gender. The table is based on all individuals who tested between July 1, 2018, and June 30, 2022. (Note that this four-year period was used to obtain three years of test-taker data due to the fact that the Subject Tests were not administered in the 2020-21 testing year because of the pandemic.) Test takers who received a No Score (NS) are excluded from the data reported in the accompanying tables.

#### **Table 2A: Performance Statistics on the GRE Subject Tests**

(Based on the performance of all individuals who tested between July 1, 2018, and June 30, 2022)

Test	Number of Test Takers	Mean	Standard Deviation	Percent Women	Percent Men
Mathematics Test	11,269	674	153	27	73
Physics Test	16,455	715	164	23	76
Psychology Test	8,049	620	110	80	19

Table 2B on the following page provides percentile ranks for the Subject Test total scores. The percentile ranks are based on the percent of test takers scoring below a particular scale score. The data are based on all individuals who tested between July 1, 2018, and June 30, 2022.

### Table 2B: GRE Subject Test Total Score Interpretive Data Used on Score Reports

(Percent of test takers scoring lower than selected scaled scores. Based on the performance of all individuals who tested between July 1, 2018, and June 30, 2022)

Blank cells imply that percentile information was not reported because there were no test takers above or below the specified scale score range.

Scaled Score	Mathematics	Physics <sup>a</sup>	Psychology
980		96	
960	96	92	
940	96	89	
920	95	85	
900	93	81	
880	90	77	
860	86	74	
840	82	71	
820	78	68	99
800	74	64	97
780	71	61	95
760	66	58	91
740	63	55	86
720	58	52	79
700	54	47	72
680	50	44	64
660	47	40	57
640	42	36	50
620	38	32	43
600	34	27	37
580	30	24	32
560	26	20	27
540	22	16	22
520	18	12	18
500	14	9	15
480	10	6	12
460	7	5	9
440	5	3	7
420	3	2	5
400	2	1	3
380	1	1	2
360	1		1
340			1
320			
300			
280			
260			
240			
220			
200			

Note: Percentile ranks for each Subject Test are based on the test volumes provided in Table 2A. <sup>a</sup> For the Physics Test, the percent of test takers scoring lower than 990 is 97.

### **Major Field Code List**

The following Major Field Code List contains the fields of study from which test takers select their intended graduate major. These fields are grouped into broad graduate major fields (Life Sciences, Physical Sciences, Engineering, Social and Behavioral Sciences, Humanities & Arts, Education, Business, Law and Other Fields).

Table 3a (on pages 26–29) contains score data by intended graduate major field and broad graduate major field (e.g., aggregation of the fields of study that constitute Agriculture) and also for the following aggregated groups of broad graduate major fields: Life Sciences, Physical Sciences, Engineering, Social Sciences, Arts and Humanities, Education, Business, and Other Fields. Score data presented includes number of test takers (N), means (M), standard deviations (SD), and the percentage of students in each of seven score ranges for verbal and quantitative scaled scores. However, only the number of test takers is reported for the broad major field "Other" or the "Other Fields" grouping (e.g., the aggregation of Fire Protection, Homeland Security, Interdisciplinary Studies, Legal Research and Professional Studies, Military Technologies, Multidisciplinary Studies).

LIFE SCIENCES	Entomology	0209
	Evolution	
Agriculture, Natural Resources and Conservation	Genetics	0210
Agricultural and Domestic Animal Services0116	Marine Biology	0211
Agricultural and Food Products Processing0117	Microbiological Sciences	
Agricultural Business and Management0118	Molecular Biology	
Agricultural Economics0101	Molecular Medicine	
Agricultural Mechanization0119	Neurosciences	
Agricultural Production0102	Nutrition	0214
Agricultural Public Services0103	Parasitology	0231
Agriculture, General0120	Pathology	0215
Agronomy0104	Pharmacology	
Animal Sciences0105	Physiology	
Applied Horticulture0121	Radiobiology	
Fishing and Fisheries Sciences and Management 0106	Population Biology	
Food Science and Technology0107	Systematics	
Forestry0108	Toxicology	
Horticulture Business Services0109	Zoology	
International Agriculture0122	Biological and Biomedical Sciences—Other	
Parks, Recreation, and Leisure Facilities Mgmt0111		
Parks, Recreation, and Leisure Studies0123	Health and Medical Sciences	
Plant Sciences (Except Agronomy, see 0104)0112	Allied Health	0601
Natural Resources and Conservation0113	Alternative and Complementary Medicine	0624
Natural Resources Management and Policy0110	Athletic Training	
Soil Sciences0114	Audiology	
Wildlife and Wildlands Science and Management 0115	Bioethics/Medical Ethics	
Agriculture, Nat Resources, and	Chiropractic	
Conservation—Other0199	Clinical/Medical Laboratory Science/Research	
	Communication Disorders Sciences and Services	0627
Biological and Biomedical Sciences	Dentistry and Oral Sciences	0604
Anatomical Sciences0201	Dietetics and Clinical Nutrition Services	0628
Animal Biology0223	Environmental Health	0605
Bacteriology0221	Epidemiology	0606
Biochemistry0202	Exercise Science	
Bioinformatics0224	Health and Medical Administrative Services	0607
Biology, General0203	Immunology	0608
Biomathematics	Health Sciences	0630
Biometry0204	Health/Medical Preparatory Programs	0631
Biophysics0222	Kinesiology	0623
Biotechnology0226	Medical Sciences	0609
Botany/Plant Biology0205	Medicinal Chemistry	0621
Cell/Cellular Biology0206	Mental and Social Health Services	
Computational Biology0227	Nursing	0610
Developmental Biology0208	Occupational Therapy	
Faalami 0207	Ontomotru	

Osteopathic Medicine		Mathematical Sciences	
Pharmaceutical Sciences	0613	Actuarial Science	
Physical Therapy	0619	Applied Mathematics	
Physician Assistant	0634	Mathematics	0703
Podiatry	0614	Probability	0704
Pre-Medicine	0615	Statistics	0705
Public Health	0616	Mathematical Sciences—Other	0799
Rehabilitation and Therapy			
Speech-Language Pathology		Physics and Astronomy	
Veterinary Medicine		Acoustics	0900
Veterinary Science		Astronomy	
Health and Medical Sciences—Other			
nealth and Medical Sciences—Other	0099	Astrophysics	
DINCICAL CCIPACEC		Atomic/Molecular Physics	
PHYSICAL SCIENCES		Condensed Matter and Materials Physics	
		Elementary Particle Physic	
Chemistry		Nuclear Physics	
Analytical Chemistry	0302	Optics/Optical Sciences	
Chemical Plastics	0307	Physics	0808
Chemistry, General	0301	Planetary Astronomy and Science	0806
Environmental Chemistry		Plasma and High-Temperature Physics	
Forensic Chemistry		Solid State Physics	
Inorganic Chemistry		Theoretical and Mathematical Physics	
Organic Chemistry		Physics and Astronomy—Other	
Medicinal and Pharmaceutical Chemistry		Trysics and ristioning Carlet minimum	
Physical Chemistry		Natural Sciences—Other	
		Natural Sciences, General	0001
Polymer Chemistry			
Theoretical Chemistry		Physical Sciences, General	
Chemistry—Other	0399	Science Technologies	
		Natural Sciences—Other	0999
Computer and Information Sciences			
Computer and Information Sciences, General		<u>ENGINEERING</u>	
Computer Programming	0401		
Computer Science	0402	Engineering—Chemical	
Computer Software and Media Applications	0408	Chemical and Biomolecular Engineering	1004
Computer Systems Analysis	0409	Chemical Engineering	
Computer Systems Networking and		Pulp and Paper Production	
Telecommunications	0410	Wood Science	
Computer/Information Technology Admin and		Chemical Engineering—Other	
Mgmt		enermed Engineering Other minimum	
Data Processing		Engineering—Civil	
Information Sciences/Studies		Architectural Engineering	1101
Microcomputer Applications		Civil Engineering	
		5 5	
Systems Analysis		Construction Engineering	
Computer and Information Sciences—Other	0499	Environmental/Environmental Health Engineerin	
		Geotechnical and Geo-environmental Engineerin	-
Earth, Atmospheric, and Marine Sciences		Structural Engineering	
Aquatic Biology/Limnology		Surveying Engineering	
Atmospheric Sciences		Transportation and Highway Engineering	1108
Biological Oceanography	0510	Water Resources Engineering	1109
Environmental Sciences	0502	Civil Engineering—Other	1199
Geochemistry	0503		
Geological Sciences		Engineering—Electrical and Electronics	
Geophysics and Seismology		Communications Engineering	1202
Geosciences		Computer Engineering	
Hydrology		Computer Hardware Engineering	
Marine Sciences			
Meteorology		Computer Software Engineering	
		Electrical Engineering	
Oceanography		Electronics Engineering	
Paleontology		Laser and Optical Engineering	
Earth, Atmospheric, and Marine Sciences—Other	er0599	Telecommunications Engineering	
		Electrical & Electronics Engineering—Other	1299

Engineering Industrial		Dhyriological Prychology	2010
Engineering—Industrial	1201	Physiological Psychology	
Industrial Engineering	1301	Psycholinguistics Psychology, General	
Manufacturing Engineering			
Operations Research		Psychometrics	2012
Industrial Engineering—Other	1399	Psychopharmacology	2013
Fundamentos Materials		Quantitative Psychology	
Engineering—Materials	1.401	Research and Experimental Psychology	
Ceramic Sciences and Engineering		Social Psychology	
Materials Engineering		Psychology—Other	2099
Materials Science		Carialania	
Metallurgical Engineering		Sociology	2404
Polymer/Plastics Engineering		Demography	
Materials Engineering—Other	1499	Rural Sociology	
Engineering Machanical		Sociology	2102
Engineering—Mechanical	1501	Social and Behavioral Sciences—Other	
Engineering Mechanics			2206
Mechanical Engineering		American Studies	
Mechanical Engineering—Other	1599	Adult Development and Aging	
		Area, Ethnic, Cultural, Gender, and Group Studies	
Engineering—Other		Criminal Justice/Criminology	
Aeronautical Engineering		Geography and Cartography	
Aerospace Engineering		Gerontology	
Agricultural Engineering		Public Affairs	
Biochemical Engineering		Social Sciences, General	
Biomedical/Medical Engineering		Urban Studies/Affairs	
Electromechanical Engineering	1616	Social and Behavioral Sciences—Other	2299
Engineering Chemistry	1617		
Engineering Physics		HUMANITIES & ARTS	
Engineering Science	1605		
		Arts—History, Theory, and Criticism	
SOCIAL AND BEHAVIORAL SCIENCES		Art History, Criticism, and Conservation	2301
		Music History, Literature, and Theory	2302
Anthropology & Archaeology		Musicology	2303
Anthropology	1701	Theatre Literature, History and Criticism	2304
Archaeology	1702	Arts—History, Theory, and Criticism—Other	2399
Anthropology and Archaeology, Other	1799	, ,	
1 3/		Arts—Performance and Studio	
Economics		Arts, Entertainment, and Media Management	2401
Applied Economics	1803	Crafts/Craft Design	
Econometrics		Dance	
Economics		Design and Applied Arts	
International Economics		Drama/Theatre Arts	
Economics, Other		Film/Video and Photographic Arts	
Economics, other		Fine and Studio Arts	
Political Science		Industrial Design	
International Relations	1001	Music	
Political Science and Government		Arts—Performance and Studio—Other	
		Arts renormance and studio other	ZTJJ
Public Policy Analysis Political Science—Other		English Language and Literature	
Political Science—Other	1999	American Literature	2502
December 1.			
Psychology	2017	Creative Writing	
Applied Psychology		English Language and Literature	
Clinical Psychology		English Literature	
Cognitive Psychology		Rhetoric and Composition/Writing Studies	
Community Psychology		English Language and Literatures—Other	2599
Comparative Psychology			
Counseling Psychology		Foreign Languages and Literatures	
Developmental and Child Psychology		African Languages and Literatures	
Experimental Psychology		American Sign Language	
Forensic Psychology		Asiatic Languages and Literatures	
Industrial and Organizational Psychology		Celtic Languages and Literatures	
Personality Psychology	2009	Classics and Classical Languages and Literatures	2609

Foreign Literature	2602	Learning Sciences	. 3408
French	2603	School Psychology	.3406
Germanic Languages and Literatures	2604	, ,,	
Italian		Education—Higher	
Russian	2606	Educational Policy	. 3501
Semitic Languages	2607	Higher Education	
Spanish		Higher Education Administration	
Iranian/Persian Languages and Literatures			
Modern Greek Language and Literature		Education—Secondary	
Romance Languages and Literatures		Secondary Education and Teaching	3601
Slavic, Baltic, and Albanian Languages and Lit		Secondary Level Teaching Fields	
Foreign Languages and Literatures—Other		Secondary Level reacting ricids	.5002
Torcigir Earliguages and Electatures Other	2000	Education—Special	
History		Education of the Gifted and Talented	3701
American History	2701	Education of Students with Specific Disabilities	
European History		Educ. of Students with Specific Learn Disabilities	
History and Philosophy of Science and Technolog		Remedial Education	
History, General	• •	Special Education and Teaching	
History—Other		Special Education—Other	
nistory—other	2/99	Special Education—Other	.3/99
Dhilosophy		Education Chadent Connection and Democracy Con	
Philosophy	2002	Education—Student Counseling and Personnel Ser	
Ethics		College Student Counseling and Personnel Services.	
Logic		Counselor Education	
Philosophy		School Counseling and Guidance Services	
All Philosophy Fields		Student Counseling and Personnel Services—Other	.3899
Philosophy—Other	2899		
		Education—Other	
Arts and Humanities—Other		Adult and Continuing Education	
Classics		Agricultural Education	
Linguistic, Comparative and Related Lang Studies		Bilingual, Multilingual, and Multicultural Educ	
Linguistics		Educational Media	
Religious Studies		Education, General	.3911
Humanities/Humanistic Studies		Junior High/Middle School Education and	
Liberal Arts and Sciences/Liberal Arts		Teaching	
Arts and Humanities—Other	2999	Outdoor Education	.3912
		Physical Education	3909
<u>EDUCATION</u>		Pre-Elementary Education	.3905
		Social and Philosophical Foundations of Education.	3906
Education—Administration		Teaching English as a Second or Foreign Language	.3907
Educational Administration	3001	Vocational/Technical Education	.3910
Educational Leadership	3003	Education—Other	.3999
Educational Supervision			
·		BUSINESS	
Education—Curriculum and Instruction			
Curriculum and Instruction	3101	Accounting	
		Accounting	.4001
Education—Early Childhood		Taxation	
Early Childhood Education and Teaching	3201	Auditing	
Kindergarten/Preschool Education and Teaching			
·····garter, reserves = a a cation and readimign		Banking and Finance	
Education—Elementary		Banking and Financial Support Services	4101
Elementary Education and Teaching	3301	Credit Management	
Elementary Level Teaching Fields		Finance	
Lientendary Level reactiffig rielus	3302	Financial Planning and Services	
Education—Evaluation and Research		International Finance	
	2407	Investments and Securities	
Educational Evaluation and Research		investments and securities	. 4103
Educational Psychology Beducational Statistics and Paccarch Mothods		Pusinges Administration and Management	
Educational Statistics and Research Methods	340 I	Business Administration and Management	4201
Educational Assessment, Testing, and	2402	Business Administration and Management	
Measurement		Business Operations	
Elementary and Secondary Research		Construction Management	4215
Higher Education Research	3405		

E-Commerce	4209	Communications and Journalism	
Entrepreneurship	4210	Advertising	4501
Health Care Administration	4211	Communications and Media Studies	4507
Hospitality Administration/Management	4208	Communications Technologies	4502
Human Resource Development		Journalism	
Human Resources Management		Mass Communications	4508
Labor and Industrial Relations		Public Relations	
Logistics and Supply Chain Management		Publishing	
Manufacturing and Technology Management		Radio, Television, and Digital Communication	
Operations Management		Speech Communication	
Organizational Leadership		Communications and Journalism—Other	
Organizational Management		Communications and Journalism Other	7377
Project Management		Family and Consumer Sciences	
			4604
Small Business Operations		Apparel and Textiles	
Sport and Fitness Administration/Management		Family and Consumer Economics	
Telecommunications Management		Family and Consumer Sciences	
Business Administration and Management—O	tner4299	Family Studies	
		Foods, Nutrition, and Wellness Studies	
Business—Other		Housing and Human Environments	
Actuarial Science—Business		Human Development	
Business/Corporate Communications		Human Sciences	
Business/Managerial Economics		Work and Family Studies	
Business Statistics	4319	Family and Consumer Sciences—Other	4699
Consulting	4307		
Data Analytics	4323	Library and Archival Studies	
Insurance	4308	Archives/Archival Administration	4702
International Business	4302	Library and Information Science	4701
Leadership	4309	Library and Archival Studies—Other	
Management Information Systems		•	
Management Science		Public Administration	
Marketing		Community Organization and Advocacy	4802
Marketing Management and Research		Public Administration	
Public Policy—Business		T done / driming detormination	
Merchandizing		Religion and Theology	
Real Estate		Ordained Ministry/Rabbinate	1003
Risk Management			
Sales		Philosophy and Religious Studies, General	
Sports Management		Religion/Religious Studies	
Statistics and Operational Research		Theology and Theology Others	
•		Religion and Theology—Other	4999
Strategy			
Supply Chain Management		Social Work	
Transportation		Social Work	
Business—Other	4399	Youth Services/Administration	
		Social Work—Other	5099
OTHER FIELDS			
		Law	
Architecture and Environmental Design		Law	5201
Architectural History and Criticism	4407		
Architectural Sciences and Technology	4408	Other Fields	
Architecture	4401	Fire Protection	5103
City, Urban, Community, and Regional		Historical Preservation	
Planning	4402	Homeland Security	
Environmental Design		Interdisciplinary Studies	
Interior Architecture		Law	
Landscape Architecture		Legal Research and Professional Studies	
Real Estate Development		Military Technologies	
Urban Design			
Architecture and Environmental Design—Othe		Multidisciplinary Studies	
A contecture and Environmental Design—Othe		Any Department Not Listed	5 199
		Underided	0000
		Undecided	0000

#### GRE® General Test Interpretive Data by Broad Graduate Major Field

Table 3A presents Verbal Reasoning, Quantitative Reasoning and Analytical Writing data for seniors and nonenrolled college graduates who stated that they intended to do graduate work in one of approximately 300 major fields. The score data are summarized by 51 broad graduate major field categories so that applicants can be compared to others likely to be most similar to them in educational goals. To view score data summarized by the 300 major fields (Table 3B), see www.ets.org/s/gre/pdf/gre\_table3B.pdf.

### Table 3A: GRE General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates Who Tested Between July 1, 2019, and June 30, 2022

(VR = Verbal Reasoning, QR = Quantitative Reasoning, AW = Analytical Writing, N = Number of Test Takers, M = Mean, and SD = Standard Deviation)

Intended Graduate Major	VR 130- 134	VR 135- 139	VR 140- 144	VR 145- 149	VR 150- 154	VR 155- 159	VR 160- 164	VR 165- 169	VR 170	VR N	VR M		QR 130- 134	QR 135- 139	QR 140- 144	QR 145- 149	QR 150- 154	QR 155- 159	QR 160- 164	QR 165- 169	QR 170	QR N	QR M	QR SD	AW 0	AW 0.5 & 1	AW 1.5 & 2	AW 2.5 & 3	AW 3.5 & 4	AW 4.5 & 5	AW 5.5 & 6	AW N	AW M	AW SD
LIFE SCIENCES	1.3	4.4	12.7	26.1	27.0	18.5	7.6	2.2	0.2	183,541	151	7.0	1.0	5.0	14.7	27.3	27.0	15.0	6.2	3.2	0.6	183,600	150	7.0	0.0	0.1	2.2	20.9	51.9	22.8	2.0	183,311	3.8	0.7
Agriculture, Natural Res. & Conservation	1.7	5.2	12.6	22.8	26.2	19.5	9.2	2.5	0.2	7,653	151	7.0	0.8	3.8	11.9	24.1	26.0	16.3	9.3	6.5	1.3	7,659	152	8.0	0.0	0.4	4.4	28.9	47.4	17.5	1.4	7,628	3.6	0.8
Biological & Biomedical Sciences	1.1	3.1	8.3	19.1	25.6	24.0	13.4	4.7	0.6	42,790	153	7.0	0.5	2.6	8.7	19.7	26.2	20.5	11.9	8.0	1.7	42,804	153	8.0	0.0	0.2	2.0	19.7	48.6	26.4	3.2	42,776	3.9	0.8
Health & Medical Sciences	1.3	4.7	14.1	28.6	27.5	16.7	5.6	1.4	0.1	133,098	150	7.0	1.1	5.8	16.8	30.0	27.3	13.2	4.2	1.4	0.2	133,137	149	7.0	0.0	0.1	2.1	20.9	53.2	21.9	1.7	132,907	3.8	0.7
PHYSICAL SCIENCES	3.3	6.4	10.1	15.2	25.0	21.0	13.3	5.1	0.7	132,024	152	9.0	0.2	8.0	2.1	5.3	9.9	15.8	23.4	32.3	10.2	132,095	161	7.0	0.0	0.6	6.2	36.8	39.9	14.4	2.1	132,045	3.5	0.8
Chemistry	1.9	4.7	8.7	15.5	23.4	24.2	15.3	5.8	0.6	7,649	153	8.0	0.2	0.9	3.5	10.5	20.7	23.8	19.2	17.0	4.2	7,657	157	8.0	0.0	0.3	2.9	24.7	44.1	24.6	3.5	7,645	3.8	0.8
Computer & Information Sciences	4.1	7.5	11.3	16.1	26.5	19.4	11.0	3.7	0.5	88,564	151	8.0	0.3	0.9	2.1	4.6	8.5	15.1	25.0	33.8	9.6	88,604	162	7.0	0.0	0.7	8.1	41.9	37.8	10.2	1.3	88,619	3.3	0.8
Earth, Atmospheric, & Marine Sciences	0.8	2.6	6.1	15.3	24.3	26.7	17.1	6.4	0.7	7,073	154	7.0	0.3	1.8	6.4	17.6	26.2	22.7	12.9	9.7	2.5	7,079	154	8.0	0.0	0.2	1.6	19.9	47.2	27.5	3.5	7,070	3.9	0.8
Mathematical Sciences	2.2	4.9	8.5	12.5	21.4	22.6	17.8	8.8	1.3	20,274	154	9.0	0.1	0.2	0.7	2.1	5.5	11.8	21.3	40.3	18.0	20,283	164	6.0	0.0	0.3	2.8	31.2	43.1	19.3	3.4	20,250	3.7	0.8
Physics & Astronomy	1.1	2.4	5.3	11.2	19.7	27.4	21.6	10.0	1.3	8,309	156	8.0	0.1	0.2	0.9	4.2	11.2	19.3	23.9	29.8	10.4	8,317	161	7.0	0.0	0.3	2.2	22.4	44.4	26.5	4.2	8,306	3.9	0.8
Natural Sciences — Other	4.5	6.5	16.1	19.4	27.7	11.6	12.3	1.3	0.6	155	150	8.0	0.6	5.8	11.6	25.2	23.9	12.9	10.3	7.7	1.9	155	152	8.0	0.0	0.0	7.7	25.2	50.3	14.2	2.6	155	3.6	0.8
ENGINEERING	4.0	7.3	11.2	16.5	24.1	20.9	12.0	3.7	0.4	89,947	151	9.0	0.2	8.0	2.0	5.5	11.5	18.7	25.5	28.6	7.1	90,224	160	7.0	0.0	0.7	6.4	36.3	39.6	15.1	1.8	89,814	3.5	0.9
Chemical	3.0	5.1	9.6	15.2	21.7	24.1	15.2	5.6	0.5	5,195	153	8.0	0.1	0.5	1.3	5.3	12.7	20.2	26.7	27.4	5.9	5,225	160	7.0	0.0	0.3	3.4	28.1	41.5	23.4	3.2	5,173	3.7	0.8
Civil	5.3	8.2	11.6	16.8	25.3	19.6	10.1	2.8	0.3	9,719	150	9.0	0.3	1.1	2.7	7.4	14.3	20.6	24.9	23.8	4.9	9,769	159	8.0	0.0	1.4	10.1	37.5	36.4	13.3	1.3	9,699	3.3	0.9
Electrical & Electronics	4.8	8.7	12.7	17.3	25.2	18.6	9.6	2.7	0.3	31,585	150	8.0	0.2	1.0	2.0	4.9	9.1	15.5	24.0	33.6	9.6	31,666	161	7.0	0.0	0.9	7.5	43.3	37.8	9.6	0.9	31,572	3.3	0.8
Industrial	3.9	7.8	13.5	21.6	23.9	17.2	9.0	2.7	0.3	4,438	150	8.0	0.2	0.9	2.5	6.6	12.9	20.4	25.3	25.3	6.0	4,446	160	7.0	0.0	0.3	3.8	38.9	43.1	12.4	1.4	4,424	3.5	0.8
Materials	1.5	4.8	9.3	13.6	23.3	24.0	16.2	6.3	0.9	3,206	153	8.0	0.0	0.2	0.6	2.9	9.5	15.9	25.2	35.4	10.4	3,211	162	6.0	0.0	0.1	2.4	32.1	41.0	21.2	3.2	3,200	3.7	0.8
Mechanical	4.3	7.7	11.5	17.0	23.8	20.5	11.5	3.3	0.3	21,476	151	9.0	0.3	0.9	2.0	5.5	11.7	19.0	26.9	27.4	6.2	21,534	160	7.0	0.0	0.9	7.3	37.0	39.2	14.1	1.5	21,448	3.4	0.9
Engineering — Other	1.8	3.9	7.3	13.5	22.3	26.7	17.9	6.1	0.5	14,328	154	8.0	0.2	0.6	2.0	5.8	13.9	23.6	27.0	22.6	4.3	14,373	159	7.0	0.1	0.3	2.6	22.1	44.5	26.4	4.0	14,298	3.9	0.8

Note: This table does not include summary information on the approximately 2 test takers whose response to the department code question was invalid (misgrids, blanks, ets.) or the approximately 55,000 test takers whose response was "Undecided".

### Table 3A: GRE General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates Who Tested Between July 1, 2019, and June 30, 2022

(VR = Verbal Reasoning, QR = Quantitative Reasoning, AW = Analytical Writing, N = Number of Test Takers, M = Mean, and SD = Standard Deviation.)

Intended Graduate Major	VR 130- 134	VR 135- 139	VR 140- 144	VR 145- 149	VR 150- 154	VR 155- 159	VR 160- 164	VR 165- 169	VR 170	VR N			QR 130- 134	QR 135- 139	QR 140- 144	QR 145- 149	QR 150- 154	QR 155- 159	QR 160- 164	QR 165- 169	QR 170	QR N	QR M	QR SD	AW	0.5	AW 1.5 & 2	AW 2.5 & 3	AW 3.5 & 4	AW 4.5 & 5	AW 5.5 & 6	AW N	AW M	AW SD
SOC. & BEHAVIORAL SCI.	1.3	3.5	8.4	16.6	22.8	23.4	16.1	7.0	1.0	88,800	154	8.0	1.5	5.7	12.7	19.5	19.6	15.6	11.5	10.6	3.3	88,888	153	9.0	0.0	0.2	2.2	19.0	44.1	28.9	5.5	88,709	4.0	0.8
Anthropology & Archaeology	0.6	1.6	5.1	14.3	22.5	27.9	19.3	7.5	1.1	2,958	155	7.0	1.9	7.1	16.7	27.6	24.7	13.6	5.6	2.4	0.3	2,959	149	7.0	0.0	0.0	1.4	15.0	46.2	31.9	5.5	2,958	4.0	0.8
Economics	2.1	4.1	7.5	11.7	20.3	23.0	19.9	10.1	1.4	19,759	155	9.0	0.1	0.4	1.4	4.5	9.2	16.3	23.6	32.7	11.7	19,828	162	7.0	0.0	0.2	2.5	26.6	43.2	22.3	5.0	19,696	3.8	0.9
Political Science	0.7	1.5	4.0	9.2	17.0	25.6	25.1	14.5	2.5	13,251	157	8.0	1.0	3.7	9.0	16.9	22.3	21.8	15.2	8.4	1.7	13,260	154	8.0	0.0	0.1	1.1	10.6	36.7	39.8	11.7	13,244	4.3	0.8
Psychology	1.0	3.6	10.0	20.8	25.8	22.9	11.9	3.6	0.4	45,978	152	7.0	2.0	7.9	17.8	25.9	23.1	13.8	6.1	2.9	0.6	45,987	149	8.0	0.0	0.2	2.2	18.2	46.9	28.5	4.0	45,952	3.9	0.8
Sociology	1.6	4.1	8.2	15.6	21.7	23.6	17.1	7.1	1.0	3,116	154	8.0	2.9	7.9	14.7	21.6	18.6	14.7	10.1	7.6	1.8	3,117	151	9.0	0.0	0.4	2.2	17.8	41.7	30.7	7.2	3,115	4.0	0.9
Soc. & Behaviorial Sci., Other	2.5	5.7	12.1	20.1	19.9	19.7	13.1	6.1	0.8	3,738	152	9.0	2.8	10.7	18.2	21.0	18.9	12.7	7.8	6.3	1.6	3,737	150	9.0	0.0	0.7	4.1	22.2	41.4	27.2	4.3	3,744	3.8	0.9
HUMANITIES & ARTS	1.0	1.9	4.9	10.2	18.0	25.1	22.9	13.3	2.5	17,945	157	8.0	2.2	6.7	13.8	21.1	21.6	16.0	9.9	7.2	1.6	17,922	151	9.0	0.0	0.2	1.8	14.1	39.0	35.8	9.1	17,940	4.1	0.9
Arts — History, Theory, & Criticism	1.0	0.8	3.2	8.9	17.8	27.1	25.7	13.3	2.1	1,061	157	7.0	1.3	5.0	11.8	20.9	25.6	18.1	9.7	6.5	0.9	1,057	152	8.0	0.0	0.1	1.2	11.4	40.1	38.5	8.7	1,063	4.2	0.8
Arts — Performance & Studio	2.1	3.9	9.1	15.8	22.2	22.9	16.0	7.0	0.9	2,414	153	8.0	1.7	4.8	10.7	16.9	19.9	17.9	14.3	10.6	3.1	2,415	153	9.0	0.1	0.4	3.1	25.2	42.6	24.3	4.2	2,413	3.8	0.9
English Language & Literature	0.9	1.5	4.5	9.3	18.7	26.3	23.8	12.9	2.2	4,972	157	8.0	2.9	8.6	16.1	24.1	22.1	13.3	7.0	5.1	0.8	4,958	150	8.0	0.0	0.2	1.4	11.6	37.6	39.1	10.1	4,971	4.2	0.8
Foreign Languages & Literatures	1.7	2.6	4.2	11.1	17.6	21.8	23.2	14.7	3.2	1,203	156	8.0	2.3	5.0	10.8	19.0	21.7	17.1	11.7	10.0	2.4	1,205	153	9.0	0.0	0.2	2.6	16.1	38.1	33.7	9.3	1,202	4.1	0.9
History	0.6	1.7	4.4	10.8	18.9	27.0	22.4	12.1	2.1	4,297	156	8.0	2.7	8.9	18.2	25.0	21.0	13.5	6.8	3.4	0.6	4,292	149	8.0	0.0	0.1	1.7	12.9	40.0	36.1	9.2	4,297	4.2	0.8
Philosophy	0.2	0.9	2.7	5.2	11.4	22.8	28.5	23.0	5.2	1,997	160	7.0	0.7	2.9	7.8	14.4	22.0	20.4	15.3	13.5	3.0	1,995	155	8.0	0.0	0.2	1.1	9.7	34.2	42.0	12.8	1,994	4.3	0.8
Humanities & Arts, Other	1.4	2.1	5.9	9.7	16.5	23.8	23.0	13.9	3.5	2,001	157	8.0	1.7	5.2	10.8	18.0	21.3	19.9	12.2	9.0	2.2	2,000	153	9.0	0.0	0.2	1.8	14.2	40.4	35.0	8.5	2,000	4.1	0.8

Note: This table does not include summary information on the approximately 2 test takers whose response to the department code question was invalid (misgrids, blanks, ets.) or the approximately 55,000 test takers whose response was "Undecided".

### Table 3A: GRE General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates Who Tested Between July 1, 2019, and June 30, 2022

(VR = Verbal Reasoning, QR = Quantitative Reasoning, AW = Analytical Writing, N = Number of Test Takers, M = Mean, and SD = Standard Deviation.)

Intended Graduate Major	VR 130- 134	V 135- 139	VR 140- 144	VR 145- 149	VR 150- 154	VR 155- 159	VR 160- 164	VR 165- 169	VR 170	VR N		VR SD	QR 130- 134	QR 135- 139	QR 140- 144	QR 145- 149	QR 150- 154	QR 155- 159	QR 160- 164	QR 165- 169	QR 170	QR N	QR M	QR SD	AW 0	AW 0.5 & 1	AW 1.5 & 2	AW 2.5 & 3	AW 3.5 & 4	AW 4.5 & 5	AW 5.5 & 6	AW N	AW M	AW SD
EDUCATION	2.5	6.3	13.5	22.8	23.0	18.7	9.5	3.3	0.4	19,610	151	8.0	3.4	10.6	20.0	25.4	19.5	11.0	5.7	3.7	0.7	19,610	148	8.0	0.0	0.6	4.2	23.3	45.5	23.2	3.2	19,587	3.8	0.9
Administration	2.5	5.8	14.1	23.5	22.4	19.7	8.2	3.6	0.3	1,036	150	8.0	3.6	10.3	18.3	25.6	18.9	11.8	5.7	5.1	0.7	1,036	149	9.0	0.0	0.5	3.6	27.6	45.8	20.0	2.5	1,035	3.7	0.8
Curriculum & Instruction	1.2	6.3	13.4	22.9	25.3	18.2	9.1	3.2	0.4	253	151	8.0	2.8	8.7	16.2	30.8	20.2	10.3	7.5	3.6	0.0	253	149	8.0	0.0	0.0	3.6	19.4	47.2	25.4	4.4	252	3.9	0.8
Early Childhood	9.6	20.5	28.9	16.9	10.8	4.8	6.0	1.2	1.2	83	145	9.0	13.3	18.1	21.7	19.3	13.3	4.8	6.0	2.4	1.2	83	145	9.0	0.0	3.6	16.7	32.1	38.1	9.5	0.0	84	3.1	0.9
Elementary	4.0	8.9	16.5	25.6	22.3	13.7	6.8	1.9	0.2	2,381	149	8.0	4.8	14.3	22.1	26.0	18.9	9.0	3.4	1.2	0.3	2,381	146	7.0	0.0	0.9	5.9	27.7	44.1	19.3	1.9	2,374	3.6	0.9
Evaluation & Research	1.4	4.0	12.6	25.2	26.8	19.5	8.2	2.1	0.2	4,827	151	7.0	2.0	8.8	21.7	28.5	21.6	10.3	4.0	2.3	0.6	4,828	148	7.0	0.0	0.2	1.9	19.7	50.2	24.9	3.0	4,826	3.9	0.8
Higher	1.5	4.7	10.3	20.4	22.5	23.5	12.2	4.6	0.4	1,644	152	8.0	2.1	7.5	15.8	23.5	22.6	15.7	8.1	4.3	0.4	1,644	150	8.0	0.0	0.2	2.6	17.4	41.1	34.0	4.7	1,645	4.0	0.8
Secondary	1.0	4.1	7.3	14.8	24.8	24.3	15.8	7.2	0.8	614	154	8.0	3.1	4.4	11.7	23.5	21.2	18.6	12.1	5.1	0.3	613	151	8.0	0.0	0.3	2.4	15.1	45.9	30.8	5.4	614	4.0	0.8
Special	4.7	11.5	18.4	26.2	19.0	13.1	5.5	1.3	0.2	2,114	148	8.0	7.0	16.9	26.1	25.4	15.7	6.3	1.6	0.8	0.2	2,114	145	7.0	0.0	1.6	8.9	33.0	38.8	15.3	2.4	2,105	3.4	0.9
Student Counseling & Personnel Srvcs	1.9	7.0	16.5	27.0	24.9	15.8	5.7	1.1	0.0	2,175	149	7.0	4.0	14.0	26.9	28.8	17.1	6.6	1.6	0.8	0.1	2,175	146	7.0	0.0	0.4	4.1	25.5	50.2	17.9	1.9	2,171	3.7	0.8
Education, Other	2.5	5.4	10.7	17.1	20.3	22.0	14.7	6.4	1.0	4,483	152	9.0	2.6	7.9	13.9	20.7	19.4	14.5	10.6	8.5	1.9	4,483	151	9.0	0.0	0.6	4.3	21.7	43.5	25.5	4.5	4,481	3.8	0.9
BUSINESS	2.5	5.4	10.3	17.1	23.4	20.7	14.0	5.9	0.6	69,740	152	8.0	0.6	2.2	5.5	10.5	14.8	17.2	18.5	22.6	8.1	69,834	158	9.0	0.1	0.3	3.3	30.3	44.6	18.3	3.2	69,505	3.7	0.8
Accounting	4.3	7.6	13.2	18.2	23.8	17.0	11.1	4.3	0.5	2,887	150	9.0	0.7	2.5	5.7	10.8	12.8	12.1	16.6	27.2	11.5	2,889	159	10.0	0.0	0.7	5.4	42.2	41.8	9.2	0.7	2,882	3.4	0.7
Banking & Finance	2.6	5.6	10.1	15.9	24.5	20.6	14.2	5.9	0.6	15,494	152	8.0	0.1	0.8	2.1	4.8	8.4	12.5	18.0	36.2	17.1	15,538	163	8.0	0.1	0.3	3.3	37.4	47.6	10.2	1.2	15,459	3.5	0.7
Business Admin & Management	1.8	3.8	8.0	15.4	21.4	23.1	17.6	7.8	1.0	24,458	154	8.0	0.9	3.0	7.7	14.3	19.1	20.6	17.9	13.3	3.0	24,481	155	9.0	0.1	0.3	3.0	20.3	41.8	28.6	5.9	24,356	3.9	0.9
Business, Other	2.8	6.5	12.2	19.3	24.5	19.0	11.0	4.2	0.4	26,901	151	8.0	0.6	2.2	5.5	10.4	14.7	17.4	19.5	22.8	7.0	26,926	158	9.0	0.0	0.3	3.3	34.0	45.6	14.6	2.1	26,808	3.6	0.8
LAW	1.3	2.9	7.7	14.2	17.9	21.0	19.0	13.3	2.6	2,547	155	9.0	1.8	6.3	12.0	17.1	19.8	18.2	12.9	9.7	2.2	2,549	153	9.0	0.0	0.4	2.1	16.6	34.7	34.1	12.0	2,548	4.2	0.9

Note: This table does not include summary information on the approximately 2 test takers whose response to the department code question was invalid (misgrids, blanks, ets.) or the approximately 55,000 test takers whose response was "Undecided".

### Table 3A: GRE General Test Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates Who Tested Between July 1, 2019, and June 30, 2022

(VR = Verbal Reasoning, QR = Quantitative Reasoning, AW = Analytical Writing, N = Number of Test Takers, M = Mean, and SD = Standard Deviation.)

		VR 135- 139	VR 140- 144	VR 145- 149	VR 150- 154	VR 155- 159	VR 160- 164	VR 165- 169		VR N			QR 130- 134	QR 135- 139	QR 140- 144	QR 145- 149	QR 150- 154	QR 155- 159	QR 160- 164	QR 165- 169	QR 170	QR N	QR M	QR SD	AW			AW 2.5 & 3	AW 3.5 & 4	AW 4.5 & 5	AW 5.5 & 6	AW N	AW M	AW SD
OTHER FIELDS										106,763												106,850										106,709		
Architecture & Environmental Design	3.0	6.5	12.5	19.0	23.1	19.9	11.0	4.5	0.5	8,016	151	8.0	0.7	2.6	7.9	15.9	21.2	19.4	16.1	13.2	3.1	8,032	155	8.0	0.0	0.3	3.9	32.7	43.3	17.5	2.3	8,002	3.6	0.8
Communications & Journalism	2.8	5.8	12.5	19.7	24.1	20.2	10.7	3.7	0.5	6,175	151	8.0	2.7	7.5	14.6	19.8	16.5	12.5	12.0	11.6	2.9	6,172	152	10.0	0.0	0.3	2.6	26.1	47.6	20.4	3.0	6,169	3.7	0.8
Family & Consumer Sciences	1.8	7.8	14.5	28.0	23.6	15.8	7.3	1.3	0.0	844	149	7.0	2.6	10.4	19.1	29.5	20.9	10.8	4.0	2.5	0.2	844	148	7.0	0.0	0.5	3.2	20.7	50.6	23.5	1.5	844	3.8	0.8
Library & Archival Sciences	0.8	1.1	3.1	9.4	19.0	27.2	24.2	12.7	2.4	714	157	7.0	1.7	4.5	16.1	27.2	24.5	15.0	6.0	4.3	0.7	714	150	8.0	0.0	0.1	1.4	14.1	48.3	31.7	4.3	714	4.0	0.8
Public Administration	1.2	3.0	8.1	14.2	22.4	25.6	17.0	7.5	1.0	2,647	154	8.0	1.7	6.6	13.0	20.6	22.3	16.1	10.0	8.1	1.7	2,646	152	9.0	0.0	0.2	2.2	18.1	43.8	29.7	6.1	2,643	4.0	0.8
Religion & Theology	1.0	2.5	4.1	8.9	15.7	27.0	23.5	13.6	3.8	878	157	8.0	2.2	5.8	12.1	22.6	25.7	17.2	9.1	5.3	0.0	876	151	8.0	0.0	0.3	1.4	10.2	38.3	40.2	9.6	881	4.3	0.8
Social Work	4.1	8.0	14.3	20.8	21.5	18.6	8.7	3.4	0.5	2,303	150	8.0	6.2	15.5	23.1	23.0	18.1	8.4	3.9	1.6	0.3	2,290	146	8.0	0.0	0.5	5.0	25.9	44.1	21.9	2.5	2,399	3.7	0.9
Other Fields, Other*										85,186												85,276										85,057		

Note: This table does not include summary information on the approximately 2 test takers whose response to the department code question was invalid (misgrids, blanks, ets.) or the approximately 55,000 test takers whose response was "Undecided".
\*Performance information is not reported for "Other Fields, Other" as this group represents a number of diverse majors.

### **Reliability and Standard Error of Measurement**

Tables 4A and 4B provide reliability estimates for the GRE General Test and GRE Subject Tests, respectively. Reliability indicates the degree to which individual test takers would keep the same relative standing if the test were administered more than once to each test taker. The reliability index ranges from zero to one; a reliability index of one indicates that there is no measurement error in the test and therefore the test is perfectly reliable.

The Verbal Reasoning and Quantitative Reasoning measures of GRE General Test are intended to have reliabilities of at least .90. The reliability of the Analytical Writing measure is similar to the reliability for other writing measures where the reported score is based on a test taker's performance on two tasks. Reliability is influenced by the consistency of the ratings assigned to each essay. Overall, the two ratings used in each essay score are in agreement about 93 percent of the time; they differ by one score point about 6 percent of the time; and they differ by two or more score points about one percent of the time.

The total test scores for the Subject Tests are intended to have reliabilities of at least .90.

Tables 4A and 4B also provide data on the standard errors of measurement (SEM) and SEM of score differences. SEM is an index of the variation in scores to be expected due to errors in measurement. For a group of test takers, it is an estimate of the average difference between observed scores and "true" scores (i.e., what test takers' scores on a test would hypothetically be if there was no measurement error). Approximately 95 percent of test takers will have obtained scores that are within a range extending from two standard errors below to two standard errors above their true scores.

The SEM of score differences is an index used to determine whether the difference between two scores is meaningful. Small differences in scores may be due to measurement error and not to real differences in the abilities of the test takers. This index incorporates the error of measurement in each score being compared. To use the SEM of score differences, multiply the value by 2. Score differences exceeding this value are likely to reflect real differences in ability at approximately a 95 percent confidence level.

Table 4A: Reliability Estimates and Standard Errors of Measurement (SEM)<sup>a</sup> for Individual Scores and Score Differences for the GRE General Test

Score	Reliability Estimate	SEM of Individual Scores	SEM of Score Differences
Verbal Reasoning	0.93	2.4	3.4
Quantitative Reasoning	0.95	2.2	3.1
Analytical Writing	0.87	0.30	0.42

<sup>&</sup>lt;sup>a</sup> The reliability estimates and SEMs for the Verbal Reasoning and Quantitative Reasoning measures of the General Test are based on item response theory (IRT). The reported values are an average of all the estimates obtained for all the multi-stage tests delivered between July 1, 2019, and June 30, 2022. The reliability estimates and SEMs for the Analytical Writing measure are computed based on split-half analyses using the performance of all individuals who tested between July 1, 2019, and June 30, 2022.

Table 4B: Reliability Estimates and Standard Errors of Measurement (SEM)<sup>a</sup> for Individual Scores and Score Differences for GRE Subject Tests

Score	Reliability Estimate	SEM of Individual Scores	SEM of Score Differences	Sample Size
Mathematics Test	0.90	42	60	1,928
Physics Test	0.93	41	57	2,781
Psychology Test	0.94	25	35	1,847

<sup>&</sup>lt;sup>a</sup>The reliability for all the Subject Tests scores are estimated using the Kuder-Richardson formula (KR-20). The reported reliability, SEM, and sample size values are based on a test edition that is representative of recent test editions between July 1, 2018, and June 30, 2022.

### Conditional Standard Errors of Measurement for the GRE Verbal Reasoning and Quantitative Reasoning Measures

Tables 4C and 4D contain estimates of the conditional standard errors of measurement (CSEM) at selected reported scores for the GRE Verbal Reasoning and Quantitative Reasoning measures. While the SEMs presented in Table 4A address the average measurement precision of the test, the measurement precision actually varies across the score scale. The CSEM reflects this variation by indicating the amount of error in a reported score at a given point on the scale. Like the SEM, the CSEM can be used to compute a confidence band around a test taker's score. Such a band would help to determine the score range in which the test taker's "true" score probably lies. Unlike the SEM, the CSEM takes the variation in measurement precision across the score scale into account.

The CSEM of individual scores incorporates the measurement error in each score. The CSEM of score differences should be used when comparing the scores of two individuals because small differences in scores may not represent real differences in the abilities of the two individuals. To use the CSEM of score differences, take the larger of the two values and multiply by 2. Score differences exceeding this value are likely to reflect real differences in ability at approximately a 95 percent confidence level.

Table 4C: Conditional Standard Errors of Measurement (CSEM) of Individual Scores at Selected Scores for the GRE Verbal Reasoning and Quantitative Reasoning Measures<sup>a</sup>

Measure	130	135	140	145	150	155	160	165	170
Verbal Reasoning	3.5	3.2	2.9	2.6	2.4	2.2	2.1	2.1	1.4
Quantitative Reasoning	3.5	3.0	2.6	2.4	2.3	2.2	2.1	2.0	0.9

<sup>&</sup>lt;sup>a</sup> The CSEM of individual scores and CSEM of score differences for the Verbal Reasoning and Quantitative Reasoning measures of the GRE General Test are based on item response theory (IRT). The reported values are an average of all the estimates obtained for all the multi-stage tests delivered between July 1, 2019, and June 30, 2022. The CSEM of individual scores and CSEM of score differences are not available for the Analytical Writing measure.

### Table 4D: Conditional Standard Errors of Measurement (CSEM) of Score Differences at Selected Scores for the GRE Verbal Reasoning and Quantitative Reasoning Measures<sup>a</sup>

Measure	130	135	140	145	150	155	160	165	170
Verbal Reasoning	5.0	4.5	4.1	3.7	3.3	3.0	2.9	2.9	2.0
Quantitative Reasoning	4.9	4.2	3.6	3.4	3.3	3.1	3.0	2.9	1.3

<sup>&</sup>lt;sup>a</sup> The CSEM of individual scores and CSEM of score differences for the Verbal Reasoning and Quantitative Reasoning measures of the GRE General Test are based on item response theory (IRT). The reported values are an average of all the estimates obtained for all the multi-stage tests delivered between July 1, 2019, and June 30, 2022. The CSEM of individual scores and CSEM of score differences are not available for the Analytical Writing measure.

### **Appendix A**

### **GRE Analytical Writing Section Score Level Descriptions**

The reported score ranges from 0 to 6, in half-point increments. The statements below describe, for each score level, the overall quality of analytical writing demonstrated on the Analytical Writing measure. The test assesses "analytical writing," so critical thinking skills (the ability to reason, assemble evidence to develop a position and communicate complex ideas) are assessed along with the writer's control of grammar and the mechanics of writing.

#### Scores 6 and 5.5

Sustains insightful, in-depth analysis of complex ideas; develops and supports main points with logically compelling reasons and/or highly persuasive examples; is well focused and well organized; skillfully uses sentence variety and precise vocabulary to convey meaning effectively; demonstrates superior facility with sentence structure and usage but may have minor errors that do not interfere with meaning.

#### Scores 5 and 4.5

Provides generally thoughtful analysis of complex ideas; develops and supports main points with logically sound reasons and/or well-chosen examples; is generally focused and well organized; uses sentence variety and vocabulary to convey meaning clearly; demonstrates good control of sentence structure and usage but may have minor errors that do not interfere with meaning.

#### Scores 4 and 3.5

Provides competent analysis of ideas in addressing specific task directions; develops and supports main points with relevant reasons and/or examples; is adequately organized; conveys meaning with acceptable clarity; demonstrates satisfactory control of sentence structure and usage but may have some errors that affect clarity.

### Scores 3 and 2.5

Displays some competence in analytical writing and addressing specific task directions, although the writing is flawed in at least one of the following ways: limited analysis or development; weak organization; weak control of sentence structure or usage, with errors that often result in vagueness or a lack of clarity.

#### Scores 2 and 1.5

Displays serious weaknesses in analytical writing. The writing is seriously flawed in at least one of the following ways: serious lack of analysis or development; unclear in addressing specific task directions; lack of organization; frequent problems in sentence structure or usage, with errors that obscure meaning.

### Scores 1 and 0.5

Displays fundamental deficiencies in analytical writing. The writing is fundamentally flawed in at least one of the following ways: content that is extremely confusing or mostly irrelevant to the assigned tasks; little or no development; severe and pervasive errors that result in incoherence.

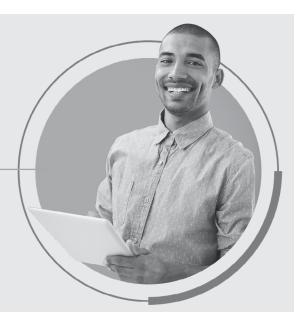
#### **Score Level 0**

The test taker's analytical writing skills cannot be evaluated because the responses do not address any part of the assigned tasks, are merely attempts to copy the assignments, are in a foreign language or display only indecipherable text.

#### **Score NS**

The test taker produced no text whatsoever.

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