



GRE

GRADUATE RECORD EXAMINATIONS®

2004-2005 Guide to the Use of Scores

This publication includes:

- Guidelines for the Use of GRE Scores
- Considerations in score interpretation
- Score interpretation and statistical information

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GRE Program
Educational Testing Service
1-609-771-7906

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GRE INSTITUTIONAL SERVICES

- **Criterionsm Online Writing Evaluation Service**—this Web-based institutional service gives students valuable writing practice on authentic GRE analytical writing topics and provides both students and instructors with holistic evaluations of students' writing skills and diagnostic feedback, instantly.
- **GRE Test Preparation Workshops for Campus Educators**—these two-day workshops provide in-depth information about GRE tests to attendees so they are able to serve as campus-wide resources in organizing and presenting campus-based GRE test preparation workshops.
- **Institutional Summary Statistics Reports**—provide graduate institutions with performance data about their applicants;
- provide undergraduate institutions with performance data about their enrolled seniors and unenrolled college graduates who have graduated within the past two years.
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For more information about any of these services, visit the GRE Web site at www.gre.org/eduserv.html.

This publication can be downloaded from the GRE Web site at www.gre.org/edupubs.html.

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The Graduate Record Examinations Board and Its Committees

The Graduate Record Examinations (GRE) Board was formed in 1966 as an independent board and is affiliated with the Association of Graduate Schools (AGS) and the Council of Graduate Schools (CGS). The Board establishes all policies for the GRE Program, which is administered by Educational Testing Service® (ETS®). In addition, ETS provides information, technical advice, and professional counsel to the Board and develops proposals to achieve its program, research, and service goals.

GRE Program activities include testing, research, publishing, and advisory services. These services are designed to assist graduate schools and departments in admission, guidance and placement, program evaluation, and selection of fellowship recipients and to assist students with their transition to graduate education.

The GRE Board is mindful of the impact of its testing, information, research, and services on students, institutions, and graduate education, and it recognizes its obligation to ensure that its policies and activities serve the best interests of the entire graduate education community. The GRE Board strives to equalize higher education opportunities for all students, improve the practices, procedures, and quality of graduate education, and promote maximum utilization of human talents and financial resources.

The GRE Board consists of 17 appointed members: four AGS appointees, four CGS appointees, and 8 at-large appointees of the Board. In addition, the president of CGS is an ex officio member of the Board.

There are five standing committees of the GRE Board: (1) the Executive Committee, which is empowered to make interim decisions and set the agenda for board meetings; (2) the Research Committee, which establishes long-range planning strategies related to research, considers précis and proposals for new research, monitors the progress of all research projects, and allocates designated GRE Board funds for research projects; (3) the Services Committee, which monitors all GRE operating services, maintains a close relationship with graduate students and faculty, and identifies long-range planning strategies involving the development of new services; (4) the Minority Graduate Education Committee, which considers new program services and long-range planning strategies for minority students, monitors ongoing minority-related GRE programs (including the Fee Waiver Program and the GRE Search Service), and evaluates research proposals and ongoing research projects that affect minorities; and (5) the Finance Committee, which considers and makes recommendations for action on all GRE budget and finance issues.

GRE Board and Committee Members

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Test of English as a Foreign Language (TOEFL®) Board

In recognition of the fact that a large number of TOEFL examinees are potential graduate students, a cooperative arrangement for the operation of the program was entered into on July 1, 1973, by Educational Testing Service, the College Board, and the Graduate Record Examinations Board. Under this arrangement, policies governing the TOEFL program are formulated by a board of 15 members. Both the College Board and the GRE Board appoint three members to the TOEFL Board to represent the interests of their respective constituencies. These six members select the remaining nine, who are identified with such groups as graduate schools of business, community colleges, foreign student advisers, teachers of English as a foreign language, nonprofit educational exchange agencies, and agencies of the federal government.

*Executive Committee

OVERVIEW OF THE GRE TESTS

GRE test scores can be used by admissions or fellowship panels to supplement undergraduate records and other qualifications for graduate study. The scores provide common measures for comparing the qualifications of applicants and aid in the evaluation of grades and recommendations.

Any accredited graduate or professional school, or any department or division within a school, may require or recommend that its applicants take the General Test, a Subject Test, or both. An institution not accredited by a recognized agency can become a score recipient if approved by the GRE Board.

The weight to be given to GRE scores can generally be established by relating what the tests measure to the orientation, curriculum, and aims of a department. Specifically, the content validity of the tests for a graduate department should be determined by reviewing each test carefully and then making subjective decisions as to the weight, if any, the scores on GRE tests should receive in relation to other admission factors.

General Test

Content

The General Test measures analytical writing, verbal, and quantitative reasoning abilities that have been acquired and developed over a long period of time. The **analytical writing** section tests critical thinking and analytical writing skills. It assesses the ability to articulate and support complex ideas, analyze an argument, and sustain a focused and coherent discussion. It does not assess specific knowledge, and there is no single best way to respond. The **verbal** section tests the ability to analyze and evaluate written material and synthesize information obtained from it, to analyze relationships among component parts of sentences, and to recognize relationships between words and concepts. In each test edition, there is a balance among the passages across three different subject matter areas: humanities, social sciences, and natural sciences. The **quantitative** section tests basic mathematical skills and understanding of elementary mathematical concepts, as well as the ability to reason quantitatively and to solve problems in a quantitative setting. There is a balance among the questions requiring arithmetic, algebra, geometry, and data analysis.

The analytical writing section, which is always the first section of the test, consists of two tasks: a 45-minute “Present Your Perspective on an Issue” task and a 30-minute “Analyze an Argument” task. The Issue task states an opinion on an issue of general interest and asks test takers to address the issue from any perspective(s) they wish, so long as they provide relevant reasons and examples to explain and support their views. The Argument task presents a different challenge: it requires test takers to critique an argument by discussing how well reasoned they find it. Test takers are asked to consider the logical soundness of the argument rather than to agree or disagree with the position it presents. The two tasks are complementary in that one requires test takers to construct their own arguments by making claims and providing evidence supporting their positions

on the issue, whereas the other requires examinees to critique someone else’s argument by assessing its claims and evaluating the evidence it provides.

Individuals who are interested in reviewing the content of the General Test can download a copy of the *GRE POWERPREP* software free of charge from the GRE Web site at www.gre.org/pracmats.html.

Some questions on the General Test are being pretested for possible use in future editions of the test; other questions may appear in identified research sections. Answers to pretest and research questions are not used in the calculation of scores for the test.

Administration

The GRE General Test is offered on computer in the U.S., Canada, and many other countries. Paper-based GRE General Test administrations are offered in areas of the world where computer-based testing is not available. The GRE calendar on the back cover of this *Guide* shows paper-based test administrations and score reporting dates for the academic year.

In the analytical writing section of the computer-based General Test, the GRE Program uses an elementary word processor developed by ETS so that individuals familiar with a specific commercial word processing software do not have an advantage or disadvantage. 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, in large part to maintain fairness with those examinees who hand-write their essays during the paper-based General Test.

The verbal and quantitative sections of the computer-based General Test are adaptive, which means that the selection of questions is tailored to an examinee’s ability level in each of the measures. Initially, an examinee is presented with a question of about average difficulty. Thereafter, the computer selects questions based upon (1) the statistical characteristics of those questions already answered (including the difficulty level), (2) the required variety of question types, and (3) appropriate coverage of content. The computer-based test format does not require test takers to be familiar with computers; a tutorial section at the beginning of the computer-based test teaches the test taker how to use the testing system.

More on the Analytical Writing Section

Analytical Writing was added to the General Test in October 2002 to respond to the need to help the admissions process by assessing higher level critical thinking and analytical writing skills of applicants and to provide a performance assessment that measures a test taker’s ability to make and critique arguments, which is central to the work done by graduate students in most fields.

Fairness is an important value in the GRE Program. Results of the analytical writing section show that there is less difference in the scores of men and women on the analytical writing section

than on the multiple-choice measures. The differences between African American and White examinees and between most Hispanic and White examinees are also smaller on the analytical writing section than on the multiple-choice measures. The difference between Asian American and White examinees is about the same as the difference on the verbal and analytical measures (Asian American examinees outscore White examinees on the quantitative measure).

ESL test takers naturally find the analytical writing section more challenging, on average, than native speakers of English. Steps have already been taken to ensure that these performance differences are not due to differences on the cross-cultural accessibility of the prompts. Special fairness reviews occur for all prompts to ensure that the content and tasks are clear and accessible for all groups of test takers, including ESL students. In addition, 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 impede clarity of meaning. Since the analytical writing measure is tapping into different skills than the multiple-choice measures, it may not be surprising that the performance of ESL examinees differs on this 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.

How the Analytical Writing Section is Scored

The scoring of the analytical writing section is the same whether the test is taken on computer or paper. Each essay receives a score from two trained readers, using a 6-point holistic scale. In holistic scoring, readers are trained to assign scores on the basis of the overall quality of an essay in response to the assigned task. If the two assigned scores differ by more than one point on the scale, the discrepancy is adjudicated by a third GRE reader. Otherwise, the scores from the two readings of an essay are averaged. The final scores on the two essays are then averaged and rounded up to the nearest half-point interval. A single score is reported for the analytical writing measure.

NOTE: The GRE Program is investigating the use of e-rater®, ETS's groundbreaking automated scoring system, as part of the scoring process for the analytical writing section. If e-rater is incorporated into the scoring process during the 2004-05 testing year, information will be available on the GRE Web site at www.gre.org/edindex.html.

The primary emphasis in scoring the analytical writing section is on examinees' critical thinking and analytical writing skills rather than on grammar and mechanics. (Scoring guides for each essay task are available on the GRE Web site at www.gre.org/writing.html.)

Test takers' essay responses on the analytical writing section will be reviewed by ETS essay-similarity-detection software and by experienced essay readers during the scoring process. In light of the high value placed on independent intellectual activity within United States graduate schools and universities, ETS

reserves the right to cancel test scores of any test taker when there is substantial evidence that an essay response includes, but is not limited to, any of the following:

- text that is substantially similar to that found in one or more other GRE essay responses;
- quoting or paraphrasing, without attribution, language or ideas that appear in published or unpublished sources;
- unacknowledged use of work that has been produced through collaboration with others without citation of the contribution of others;
- essays that are submitted as work of the examinee when the ideas or words have, in fact, been borrowed from elsewhere or prepared by another person.

When one or more of the above circumstances occurs, the test taker's essay text, in ETS's professional judgment, does not reflect the independent, analytical writing skills that this test seeks to measure. Therefore, ETS must cancel the essay score as invalid and cannot report the GRE General Test scores of which the essay score is an indispensable part.

Test takers whose scores are cancelled will forfeit their test fees and must pay to take the entire GRE General Test again at a future administration. No record of the score cancellations, or the reason for cancellation, will appear on their future score reports sent to colleges and universities.

Subject Tests

Subject Tests, available in the 8 disciplines listed below, measure achievement in particular fields of study.

Biochemistry, Cell and Molecular Biology	Literature in English
Biology	Mathematics (Rescaled)*
Chemistry	Physics
Computer Science	Psychology

Every Subject Test yields a total score, and some yield subscores. Subscores enable assessment of strengths and weaknesses and can be used for guidance and placement purposes. Each test deals with the subject matter that is emphasized in many undergraduate programs as preparation for graduate study in the field.

Individuals who are interested in reviewing the content of a particular Subject Test can download a copy of the corresponding Subject Test practice book free of charge from the GRE Web site at www.gre.org/pracmats.html.

The Subject Tests, offered only at paper-based administrations, will be given in November 2004, December 2004, and April 2005 at test centers throughout the world. The Computer Science Test will not be administered in April 2005. The GRE calendar on the back cover of this *Guide* shows test administration and score reporting dates for the academic year.

***NOTE:** The GRE Mathematics Test was rescaled effective October 2001 and renamed "Mathematics Test (Rescaled)"; the content of the test did not change. Although the range of scores for the Mathematics Test (Rescaled) continues to extend from 200 to 990, scores earned on the test after October 2001 should not be compared to scores earned earlier.

GUIDELINES FOR THE USE OF GRE SCORES*

The GRE Board has adopted a statement regarding fair and appropriate use of GRE scores. This statement can be found on the GRE Web site at www.gre.org/edindex.html.

Introduction

These guidelines have been adopted by the Graduate Record Examinations (GRE) Board to provide information about the appropriate use of GRE test scores for those who use the scores in graduate admissions and fellowship selection processes and for other approved purposes. They are also intended to protect students from unfair decisions that may result from inappropriate uses of scores. Adherence to the guidelines is important.

The GRE General Test and Subject Tests are designed to assess academic knowledge and skills relevant to graduate study. As measures with known statistical properties and high-quality technical characteristics, the scores from these tests, when used properly, can improve graduate admissions and fellowship selection processes.

Any GRE test, however, has two primary limitations: (1) it does not and cannot measure all the qualities that are important in predicting success in graduate study or in confirming undergraduate achievement and (2) it is an inexact measure; that is, only score differences that exceed the standard error of measurement of a given score can serve as reliable indications of real differences in academic knowledge and developed abilities.

Although limitations and cautions apply to all admissions measures, the GRE Board has a particular obligation to inform users of the appropriate uses of GRE scores and to identify and try to rectify instances of misuse. To this end, the following policies and guidelines are available to all GRE test takers, institutions, and organizations that are recipients of GRE scores.

Policies

In recognition of its obligation to ensure the appropriate use of GRE scores, the GRE Board has developed policies designed to make score reports available only to approved recipients, to encourage these score users to become knowledgeable about the validity of the tests, to protect the confidentiality of examinees' scores, and to follow up on cases of possible misuse of scores. The policies are discussed below.

Score recipients. Accredited undergraduate and graduate institutions and non-degree-granting organizations that award graduate fellowships are eligible for consideration as score recipients. Institutions and organizations that do not meet either one of these requirements are, in general, not eligible to be score recipients. The GRE Board retains the right to make exceptions to this policy in special circumstances.

Validity. The general appropriateness of using GRE test scores for graduate admissions, fellowship selection, and other approved purposes has been established by research studies carried out by Educational Testing Service and others, as well as by studies conducted through the GRE Validity Study Service. GRE scores may be appropriate for some other purposes, but it is important for the user to validate their use for those purposes. To assist institutions in evaluating proposed uses, these guidelines include information about appropriate and inappropriate uses.

Confidentiality. GRE scores, whether for an individual or aggregated for an institution, are confidential and can be released only by authorization of the individual or institution or by compulsion of legal process.

Use of scores in aggregated form. Information based on GRE scores may be useful to prospective students, but use of a precise mean or median should be avoided. Graduate programs and institutions are urged to report GRE scores in ranges such as the highest and lowest scores of the middle 50 percent of the admitted students. Presenting information by score ranges emphasizes the diversity of individual scores for any one graduate program or institution, and also makes clear the overlap of scores among graduate programs and institutions.

Use of GRE scores in aggregated form as a measure for ranking or rating graduate programs, institutions, university systems, or states is strongly discouraged except when the scores are used as one indicator among several appropriate indicators of educational quality.

Encouragement of appropriate use and investigation of reported misuse. All users of GRE scores have an obligation to use the scores in accordance with published GRE Board policies and guidelines. Institutions have a responsibility to ensure that all individuals using GRE scores are aware of the GRE Board score-use policies and guidelines and to monitor the use of the scores, correcting instances of misuse when they are identified. The GRE Program staff is available to assist institutions in resolving score-misuse issues.

Guidelines

1. Use Multiple Criteria

Regardless of the decision to be made, multiple sources of information should be used to ensure fairness and balance the limitations of any single measure of knowledge, skills, or abilities. These sources may include undergraduate grade point average, letters of recommendation, personal statement, samples of academic work, and professional experience related to proposed graduate study. GRE scores should not be used exclusively.

Use of multiple criteria is particularly important when using GRE scores to assess the abilities of educationally disadvantaged students, students whose primary language is not English, and students who are returning to school after an extended absence. Score users are urged to become familiar with factors affecting score interpretation for these groups as discussed in this publication.

2. Accept Only Official GRE Score Reports

The only official reports of GRE scores are those issued by Educational Testing Service and sent directly to approved institutions and organizations designated by the test takers. 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 the accuracy of the scores and whether an official report was issued.

* Revised and approved by the GRE Executive Committee in June 2002, for implementation in October 2002.

3. Conduct Validity Studies

Departments using GRE scores for graduate admissions, fellowship awards, and other approved purposes are encouraged to collect validity information by conducting their own studies. The GRE Program staff will provide advice on the design of appropriate validation studies without charge.

4. Maintain Confidentiality of GRE Scores

All individuals who have access to GRE scores should be aware of the confidential nature of the scores and agree to maintain their confidentiality. Institutional policies should be developed to ensure that confidentiality is maintained. For example, GRE scores should not be placed on documents sent outside the institution.

5. Consider Analytical Writing, Verbal, and Quantitative Scores as Three Separate and Independent Measures

Since the level of skills in analytical writing, verbal, and quantitative abilities required for success in graduate school varies by field or department, analytical writing, verbal, and quantitative scores should not be combined. In some cases, departments may wish to establish weights for the three measures, given the program's emphasis on particular skills. This is appropriate only when based upon empirical evidence, such as a validity study.

6. Consider Carefully Any Use of a Composite Measure

A cutoff score based only on GRE scores should never be used as a sole criterion for denial of admission. The use of a cutoff score combining analytical writing, verbal, and quantitative is especially problematic because the scales for the measures differ greatly. Any department considering the use of a cutoff score should compile a rationale justifying the appropriateness of such a score for each measure: 1) evidence that the proposed cutoff score for the measure usefully distinguishes between individuals who are likely to succeed in graduate school and those who are not, and 2) the impact of the proposed cutoff score on the institution's goals related to diversity.

7. Conduct Reviews of Subject Test Content

Although each Subject Test is developed and updated regularly by a committee of examiners composed of individuals who are actively teaching in the field, the match between the test and the curriculum in a given department may not be exact and may vary over time. Departments, therefore, are encouraged to obtain free copies of the relevant tests periodically and review them to verify the appropriateness of their content. The free practice books can be downloaded from the GRE Web site at www.gre.org/pracmats.html.

8. Avoid Decisions Based on Small Score Differences

Small differences in GRE scores (as defined by the standard error of measurement) should not be used to make distinctions among examinees. Standard errors of measurement (SEMs) vary by test and are available in this publication. Interim score distribution information for the analytical writing section is available on the GRE Web site at www.gre.org.

9. Do Not Compare Scores from Different Tests

GRE General Test scores are not directly comparable with scores on other graduate or undergraduate admission tests. Subject Test scores should be compared only with other scores on the same Subject Tests (for example, a 680 on the

Physics Test is not equivalent to a 680 on the Chemistry Test). Percentile ranks should be compared only if they are based on the same reference population.

10. Recognize Limitations of Scores Earned on Tests Taken Under Special Conditions

GRE tests are offered with special arrangements and test materials to accommodate the needs of students with visual, physical, hearing, and learning disabilities. Depending upon the nature and extent of the disability, the scores may not accurately reflect a student's educational achievement. For some students, the nature of their disabilities may make it advisable to waive GRE test score requirements.

Normally Appropriate and Inappropriate Uses of GRE Scores

The suitability of a GRE test for a particular use should be explicitly examined before using test scores for that purpose. The following lists of appropriate and inappropriate uses of GRE scores are based on the policies and guidelines outlined above. The lists are meant to be illustrative, not exhaustive, in nature. There may be other appropriate uses of GRE scores, particularly for nonadmissions purposes, but any uses other than those listed below should be discussed in advance with GRE Program staff to determine their appropriateness.

If a use other than those appropriate uses listed below is contemplated, it will be important for the user to validate the use of scores for that purpose. The GRE Program staff will provide advice on the design of such validity studies without charge.

Subject Test scores may be considered for the award of undergraduate credit only in the field of the test and only when a rationale has been developed that discusses the relationship between GRE Subject Test scores and the amount of credit awarded. This rationale must be made available to users of any transcripts that contain credit awarded in this manner.

Appropriate Uses

Provided all applicable guidelines are adhered to, General Test, Subject Tests, and Writing Assessment scores are suitable for the following uses:

1. selection of applicants for admission to graduate school
2. selection of graduate fellowship applicants for awards
3. selection of graduate teaching or research assistants
4. guidance and counseling for graduate study

Inappropriate Uses

1. Requirement of a minimum score on the General Test for conferral of a degree, credit-by-examination, advancement to candidacy, or any noneducational purpose
2. Requirement of scores on the General Test, Subject Tests, or Writing Assessment for employment decisions, including hiring, salary, promotion, tenure, or retention (except for the awarding of assistantships to graduate students)
3. Use of any measure involving a summation of verbal, quantitative, analytical, and analytical writing scores, or any subset of these scores, without first conducting and documenting a validity study to establish an appropriate weight for each measure

Comments, complaints, inquiries, and suggestions about the use of GRE test scores are welcome. To contact the GRE Program office, see the inside front cover.

CONSIDERATIONS IN SCORE INTERPRETATION

GRE test scores should be used to supplement the information provided in a person's application, such as undergraduate record and letters of recommendation. Officials responsible for admission at each institution must determine the significance of GRE scores for each applicant. Particular attention must be paid to the use of GRE scores for individuals described below. Experience of institutions or departments should continue to be the best guide to interpretation of GRE test scores in these instances. GRE research reports on the topics listed below can be downloaded from the GRE Web site at www.gre.org/resintro.html.

Repeat Test Takers

Individuals are permitted to take GRE tests more than once. GRE score reports will contain scores earned within the past five-year period. Repeaters of the General Test and Subject Tests, on average, show a score gain of 20-30 points, but the possible significance of this finding is tempered by the fact that repeaters are typically a self-selected group who believe that repeating a test will increase their scores.

Score recipients are cautioned not to view an increase in scores necessarily as a reflection of academic gain, especially over a short time period. Differences in Subject Test scores over longer time periods, however, may be significant in terms of academic gain due to intervening learning experiences or of academic loss due to forgetting.

There are several ways in which graduate departments can judge multiple scores for an individual (e.g., use average of all scores, use most recent score, use highest score). Using the mean score may be the best technique because it is the most objective. Whatever approach is adopted, it should be used consistently with all applicants.

Examinees with Old GRE Scores

The GRE Board established a policy effective October 1, 1985, of retaining and reporting GRE scores earned during the five-year period before the beginning of the current testing year. For examinees who tested prior to October 1985, scores are reported according to the policy in effect when the examinees took the test. Currently, GRE scores are reported for tests taken between October 1984 and September 1985.

An institution using these older scores should be aware of the interpretation problems they present. The age of the scores and the degree to which the applicant's competence may have changed in the intervening time are factors to be considered. The problem lies in determining how much the applicant's competence has changed in either direction in the intervening years and how the change affects present potential for graduate work. Institutions may prefer to make decisions about older scores on an ad hoc basis; for example, an institution may waive the GRE requirement, request that the applicant retake the test, or use the older scores.

Minority Examinees

GRE scores, like those on similar standardized tests, cannot completely represent the potential of any person, nor can they alone reflect an individual's chances of long-term success in an academic environment. It should be remembered that the GRE tests provide measures of certain types of developed abilities and achievement, reflecting educational and cultural experience over a long period. Special care is required in interpreting the GRE scores of students who may have had educational and cultural experiences somewhat different from those of the traditional majority.

Research indicates that GRE scores are valid predictors of success in the first year of graduate school for all students. Available samples of

minority students, however, have been very small. Information about specific research regarding test scores and minority groups can be found in the publication entitled *Sex, Race, Ethnicity, and Performance on the GRE General Test*. This publication can be downloaded from the GRE Web site at www.gre.org/edupubs.html.

International Examinees

Various factors complicate the interpretation of GRE scores for international students. Obviously, an understanding of English is important since lack of fluency in English may affect test performance. Moreover, since the GRE tests are developed for students who have been educated in the United States, cultural and educational backgrounds must be considered along with linguistic factors.

ETS offers tests developed specifically for testing the English language proficiency of nonnative English speakers. The most widely used English language proficiency test is the Test of English as a Foreign Language, commonly known as the TOEFL test. The primary purpose of the TOEFL test is to measure the general English proficiency of people who are nonnative speakers of English and want to study at colleges and universities where English is the language of instruction. The TOEFL test measures English language proficiency in the areas of listening, structure, writing, and reading comprehension. A TOEFL-related test is the Test of Spoken English (TSE®), which measures the ability of nonnative speakers of English to communicate orally in English.

These English language proficiency tests are often required for admission to graduate as well as undergraduate institutions, and are designed to complement one another in the admissions process. An indicator of the general level of English proficiency of international students may be obtained by looking at the section scores as well as the total score on the TOEFL exam, along with the scores on the writing measure and the TSE. This information, in conjunction with the performance on the GRE tests, should provide a better basis for determining the extent to which English proficiency may be a factor in the GRE scores earned by these students.

Score users should be aware that the TOEFL Test of Written English (TWE®) and the GRE analytical writing measure are very different. The TWE is not designed to measure higher levels of thinking and analytical writing, but centers instead on command of English vocabulary, grammar, spelling, and syntax. Therefore, scores on the two tests are not at all comparable. Because the TOEFL test emphasizes fundamental writing 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. Information regarding test scores and international examinees is available upon request.

Examinees with Disabilities

ETS makes special testing arrangements for individuals who have currently documented visual, physical, hearing, or learning disabilities and are unable to take the tests under standard conditions. The tests are administered in a nonstandard manner chosen to minimize any adverse effect of the examinee's disability upon test performance and to help ensure that, insofar as possible, the resulting scores represent the examinee's educational achievement.

Depending on the nature and extent of the disability, an examinee's scores may not fully reflect his or her educational achievement and, because there are so few disabled persons taking GRE tests and their circumstances vary so widely, it has not been possible to provide special interpretive data for these examinees. Therefore, graduate schools should seriously consider waiving GRE requirements for applicants with certain disabilities.

Essay Responses on the Analytical Writing Section

GRE criteria for evaluating Analytical Writing essay responses emphasize critical thinking skills (the ability to reason, assemble evidence to develop a position, and communicate complex ideas) more heavily than an examinee's control of the fine points of grammar or the mechanics of writing (e.g., spelling).

A GRE essay response should be considered a rough first draft since examinees do not have sufficient time to revise their essays during the test. Examinees also do not have dictionaries or spell checking or grammar checking software available to them.

Essay responses at paper-based administrations must be handwritten; essay responses at computer-based administrations must be word processed. 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.

GRE essay topics are administered under standardized conditions; essay responses can provide important information above and beyond any academic writing samples that may be required (e.g., papers from a course). Validity research has shown that the Analytical Writing essay score is correlated with academic writing more highly than is the personal statement.

The ability of ESL students to write in English may be affected not only by their language capability but also by their prior experience with the kinds of critical writing tasks in the test. Where educational systems do not stress these skills, performance may not reflect the applicant's ability to learn these skills in a graduate setting.

After faculty have made admissions decisions about applicants, GRE essay responses should be destroyed. Essay responses submitted for admissions decisions should not be shared for any other purpose.

REPORTING AND USING GRE SCORES

Score Reporting Policies

GRE score reporting policies have been adopted by the GRE Board to encourage the appropriate use of GRE scores and to protect the right of individuals to control the distribution of their own score reports. Current GRE Board policy states that scores are reportable for five years. For scores earned prior to October 1985, please refer to page 8, "Examinees with Old GRE Scores."

Score reports for the computer-based General Test are released approximately 10-15 days after the test date to the examinees and to accredited institutions of higher education granting the baccalaureate or higher degrees and approved graduate fellowship-granting sponsors designated by the examinees.

Score reports for the paper-based General Test and Subject Tests are distributed approximately four to six weeks after the test date.

GRE score reporting is cumulative. That is, if an examinee has taken one or more tests within the five-year period previous to the 2004-2005 testing year (October 1, 1999, to June 30, 2004), previously earned scores will be reported with the latest ones. Absences are not reported.

An examinee may choose to have only General Test scores, only Subject Test scores, only standalone Analytical Writing or Writing Assessment scores, or any combination of the above sent to an institution. However, the examinee may not choose to have only those scores from a specific test date reported.

Percentile ranks shown on score reports are based on the performance of the current reference group for each test regardless of when the scores were earned. Percentile rank information for the analytical writing section of the General Test is preliminary and is based on individuals who tested between October 1, 2002, and June 30, 2003. The percentile rank for any score may vary over the years depending on the scores of the group with which the score is compared. Thus, when two or more applicants are being compared, the comparison should be made on the basis of their respective scores; if percentile ranks are considered, they should all be based on the percentile rank tables in the most recent edition of the *Guide*.

Reporting Revised 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 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 schools or fellowship sponsors still considering their applications.

Confidentiality and Authenticity of GRE Scores

GRE scores are confidential and are not to be released by an institutional recipient without the explicit permission of the examinee. **GRE scores are not to be included in academic transcripts.** Dissemination of score records should be kept at a minimum, and all staff who have access to them should be explicitly advised of their confidential nature.

To ensure the authenticity of scores, the GRE Board urges that institutions accept only official reports of GRE scores received directly from ETS.

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.

GRE Scores and Graduate Admissions

Many factors play a role in an applicant's admissibility and expectation of success as a graduate student. GRE scores are only one element in this total picture and should be considered along with other data. **The GRE Board believes that GRE scores should never be the sole basis for an admissions decision and that it is inadvisable to reject an applicant solely on the basis of GRE scores. A cutoff score below which every applicant is categorically rejected without consideration of any other information should not be used.**

Scores on the GRE General Test permit comparison of one applicant to a graduate school with other applicants for the same program at that institution as well as with everyone else who took the test. The GRE Subject Tests provide an additional measure of applicants' preparation for graduate school. For certain Subject Tests, subscores provide further information for

consideration. These subscores, which reflect a student's general strengths and weaknesses in the major areas on which the total score is based, aid in the interpretation of the total score. Often the subscores can suggest areas in which the student may require extra work. A low subscore, however, may be the result of lack of exposure to a particular subfield. As a result, subscores should always be reviewed in relation to the applicant's undergraduate history.

For admissions decisions, the weight to be given to GRE scores can generally be established by relating what the tests measure to the orientation, curriculum, and aims of the department. Specifically, the content validity of the tests for a graduate department should be determined by reviewing each test carefully and then making subjective decisions as to the weight, if any, the scores on GRE tests should receive in relation to other admission factors.

SCORE INTERPRETATION AND STATISTICAL INFORMATION

Analytical Writing Section of the General Test and Writing Assessment

- The range of scores is from 0 to 6 in half-point increments (see page 23). The analytical writing section consists of two essay tasks—Issue and Argument—and the analytical writing score represents the average of a test taker's scores for the two essays. If no essay response is given for either of the two tasks in this section, an NS (No Score) is reported for the section. If an essay response is provided for only one of the two writing tasks, the task for which no essay response is provided will receive a score of zero.
- Scoring guides have been developed for both writing tasks. The scoring guides, which describe the characteristics of a typical essay at each score level, are available at www.gre.org/writing.html.
- Scores on the analytical writing section should be interpreted in the same way across years. A score of 4 earned in 2002, for example, will be based on the same standards as a score of 4 earned in 2001.
- The reliability of analytical writing scores is estimated at .72. This is similar to the reliability for other writing measures where the reported score is obtained by averaging the performance on two prompts.
- Essay test reliability is influenced by rater agreement, i.e., the consistency of scores assigned to the same pair of essays by different raters. For the analytical writing scores, estimated interrater reliability using the Spearman-Brown formula is .93.
- A research study examined consistency of ratings of both Issue and Argument prompts. Each essay was read by two readers. Readers' ratings were in exact agreement about 57 percent of the time, they differed by one score point about 40 percent of the time, and they differed by two score points about 4 percent of the time.

- A research study (*Further Validation of a Writing Assessment for Graduate Admissions* [GRE No. 96-13]) was conducted to establish the relationship between students' performance on each of the two writing exercises and several nontest indicators of students' writing skills and achievements. The study results revealed modest relationships between Writing Assessment essays and the various nontest indicators of writing. Performance on the Writing Assessment exhibited the strongest relationship with course-related writing samples, arguably the most compelling of the nontest indicators of students' writing ability. There was no indication that the relationship between essays and course-related writing samples might depend on particular characteristics of the sample, including gender, ethnicity, best language, and undergraduate major. The research report can be downloaded from the GRE Web site at www.gre.org/reswrit.html.
- The analytical writing section is designed to measure different skills from those assessed in the multiple-choice verbal measure of the GRE General Test. The analytical writing section is performance based and candidates must organize and articulate their own ideas as they discuss a complex issue and evaluate the logical soundness of an argument.
- The TOEFL and GRE writing measures are quite different, by design. The TOEFL test emphasizes rhetorical and syntactic competence, whereas the GRE analytical writing section emphasizes critical reasoning and analytical writing proficiency. Although both the TOEFL and GRE programs report essay scores on a 6-point scale, the scoring criteria differ and scores on the two tests are not intended to be comparable.
- Faculty seeking help in conducting validity studies on the analytical writing section should review the Score Level Descriptions on page 23 of this publication and consult the document, *How to Interpret and Use GRE Analytical Writing Scores*, which is available for free download on the GRE Web site at www.gre.org/edupubs.html.

Verbal and Quantitative Sections of the General Test

- The range of General Test scores for each measure is from 200 to 800, in 10-point increments. If no answers are given for a section, an NS (No Score) is reported for that section. Examinees who received an NS are excluded from the data reported in Tables 1A, 4, 5, and 6.
- Scores from the different measures should not be compared, because each measure is scaled separately.
- For the computer-based measures, the reported score is based on the performance on the particular questions that are presented by the design of the test as well as on the number of questions answered. The test design factors that influence which questions will be presented to an examinee include the (1) characteristics (including difficulty level) of those questions already answered, (2) question types, and (3) appropriate coverage of content. On the paper-based version of the General Test, the reported scores are derived from the number of questions answered correctly.
- For each measure, some examinees do not finish the test. Because the number of answers is incorporated into the calculation of the scores, it is important that test takers answer every question.
- Research indicates that scores obtained from the computer-based multiple-choice sections are comparable to scores from the paper-based sections. Thus, the mode of testing is not indicated on the score report. A research report, *Comparability of Paper-and-Pencil and Computer-Adaptive Test Scores on the GRE General Test* (No 95-08P), can be downloaded from the GRE Web site at www.gre.org/resdevelop.html.
- The General Test measures are intended to have reliabilities of at least .90. The estimated reliabilities for the two measures are at or above .90.
- The standard errors of measurement (SEM) of score differences should be taken into account when comparing examinees' scores on the same measure (see Table 5). Score recipients should avoid making decisions based on small score differences.
- The conditional standard errors of measurement (CSEM) presented in Table 6A reflect the variation in observed scores at particular points on the score scale. Like the SEM, they can be used to compute a confidence band around an examinee's observed score to determine a score range in which the true score probably lies. Unlike the SEM, the CSEM takes the variation in measurement precision across the score scale into account. The CSEM of difference scores (Table 6B) can be used to evaluate the difference between the scores from two examinees.

- Although each General Test measure assesses different developed abilities, scores on the multiple-choice measures are moderately to highly related. The correlation between verbal and quantitative scores is .36, the correlation between verbal and analytical writing scores is .60, and the correlation between quantitative and analytical writing scores is .18.
- The predictive validity results reported in Table 7 indicate that General Test scores are slightly to moderately predictive of graduate first-year grade point average. The combination of General Test scores and undergraduate grade point average predicts graduate first-year grade point average more effectively than does any of these predictors alone.

Subject Tests

- The range of scaled scores is different for the various Subject Tests—from 200 to 990, in 10-point increments—although the score range for any particular Subject Test is usually smaller. The range of subscores is from 20 to 99, although the range for any particular Subject Test subscore is usually smaller.
- On all the Subject Tests, the reported score is derived from the number of correct answers minus one-fourth of the number of incorrect answers.
- Scaled scores on the same Subject Tests generally are directly comparable across years. A Chemistry Test score of 650 in 2004, for example, should be considered equivalent to a Chemistry Test score of 650 earned in 2003. The exceptions are scores earned on the Mathematics Test before and after October 1, 2001.
- The Subject Tests are intended to have reliabilities of at least .90 for the total test scores. For each of the Subject Tests, the reliability coefficient of the total scores is at least .90, and the reliability coefficient of the subscores is at least .80.
- The SEM of score differences should be taken into account when comparing examinees' scores on the same Subject Test (see Table 5). Fine distinctions should not be made between two scores.
- The predictive validity results reported in Table 8 indicate that individual Subject Tests predicted graduate first-year grade point average moderately well and often provided better prediction than each of the General Test measures. Subject Tests were more predictive than undergraduate grade point average in half the cases. When composites of predictors were formed, Subject Tests substantially added to the predictive power of undergraduate grade point average and General Test scores.

STATISTICAL TABLES

Description of the Tables

Tables 1-3 (Interpretive Data)

To aid in the interpretation of scaled scores, the GRE Program describes scores in terms of their standing in appropriate reference groups. Tables 1A-3 provide percentile ranks (i.e., the percentages of examinees in a group who obtained scores lower than specified scores) for the General Test, Subject Tests, and Subject Test subscores. Tables 1A, 2, and 3 are based on all examinees who tested between July 1, 2000, and June 30, 2003.¹ Table 1B is based on all examinees who tested between October 1, 2002, and June 2003.

The percentile ranks given in Table 3 for the Subject Test subscores may be used for diagnostic interpretation of the total score. For example, an examinee who obtains a score of 650 on the GRE Biology Test is likely to have subscores of 65, assuming the examinee is similarly able in the content areas measured by each subscore. For that examinee, scores much above or below 65 on a subscore would indicate strength or weakness in the content area associated with that subscore. Note that the strength or weakness could possibly reflect training that was targeted toward specific content areas.

Note that the GRE testing year has changed from October-September to July-June. Therefore, the interpretive data time periods have been adjusted accordingly.

Percentile rank information for the analytical measure that was discontinued in September 2002 is available on the GRE Web site at www.gre.org/edupubs.html.

Percentile rank information for discontinued and significantly revised Subject Tests and subscores is available from the GRE Program upon request.

Table 4 (Interpretive Data by Major Field)

Table 4 contains verbal and quantitative 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 broad graduate major field categories so that applicants can be compared to others likely to be most similar to them in educational goal.²

No institution is likely to attract graduate school applicants comparable to the full range of individuals taking the General Test. Thus, the data in Tables 1A-4 may be of limited use to a school interested in evaluating the performance of its own applicants. For this reason, local data based on an institution's applicants or admitted students might be more relevant. Local data for General Test scores of students admitted to different departments within the institution may be even more useful. These local data can be compared to the data in Table 4.

Table 5 (Reliability and Standard Error of Measurement)

Table 5 provides data on reliability coefficients for GRE tests. Reliability indicates the degree to which individual examinees would keep the same relative standing if the test were administered more than once to each examinee. The reliability index ranges from zero to 1.00; a reliability index of 1.00 indicates that

there is no measurement error in the test and therefore the test is perfectly reliable.

Table 5 also provides data on the Standard Error of Measurement (SEM) and SEM of score differences. SEM is an index of the variation in scores to be expected because of imprecise measurement. For a group of examinees, it is an estimate of the average difference between observed scores and true scores (i.e., what examinees' scores on a test would hypothetically be if there were no error in the measurement process). Approximately 95 percent of examinees 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 true differences in the abilities of the examinees. This index incorporates the error of measurement in each examinee's score being compared. Approximately 95 percent of the observed differences between the obtained scores of examinees who have the same true score will be less than two times the SEM of score differences.

For the analytical writing section, in which the scoring involves human judgment, the standard error of scoring describes the reliability of the process of scoring the examinees' responses. The more consistent the ratings assigned to the same responses by different essay readers, the smaller the standard error of scoring. For example, if a large number of examinees take a test for which the standard error of scoring is 1 point, about two-thirds of the examinees will receive scores within 1 point of the scores that they would get if their responses were scored by all possible essay readers.

Tables 6A and 6B (Conditional Standard Errors of Measurement)

Tables 6A and 6B contain estimates of the conditional standard error of measurement (CSEM) at selected reported scores for the verbal and quantitative measures. While the SEMs presented in Table 5 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 an examinee's reported score at a given point on the scale. The CSEM of score differences is affected by two test scores, which means that small differences in scores are unlikely to reflect a true difference in ability. To use the CSEM of difference scores, take the larger CSEM value and multiply by 1.65. Scores exceeding this value are likely to reflect a true difference in ability at 90% confidence level.

Tables 7 and 8 (Predictive Validity Data)

Predictive validity is the extent to which one variable, such as a test score, can predict a criterion variable, such as later grades. Predictive validity is expressed as a correlation coefficient between the predictor variable and the criterion variable. Tables 7 and 8 present average estimated correlations between graduate first-year grade point average and various predictors (e.g., GRE scores and undergraduate grade point average) singly and as weighted composites of predictors.

12 ¹ For interpretive information about college seniors or recent college graduates who have not yet enrolled in graduate school, go to the GRE Web site at www.gre.org/table1c.html.

² Analytical writing data by broad major field, as well as verbal, quantitative, and analytical writing data by major field, is available on the GRE Web site at www.gre.org/edupubs.html.

**Table 1A: Verbal and Quantitative Interpretive Data
Used on Score Reports**

(Based on the performance of all examinees who tested between July 1, 2000, and June 30, 2003)

Scaled Score	Percent of Examinees Scoring Lower than Selected Scaled Scores	
	VERBAL REASONING	QUANTITATIVE REASONING
800	99	92
780	99	86
760	99	82
740	99	77
720	98	72
700	96	68
680	95	64
660	92	59
640	90	55
620	87	50
600	84	46
580	79	42
560	75	37
540	69	33
520	64	30
500	59	26
480	53	22
460	48	19
440	42	16
420	36	14
400	31	11
380	25	9
360	20	7
340	15	5
320	10	4
300	6	3
280	3	2
260	1	1
240	1	1
220		
200		
Mean	470	598
Standard Deviation	121	148
Number of Examinees	1,206,244	1,205,758
Percent Women	53	53
Percent Men	42	42

Note: Interpretive data for the analytical section of the General Test that was discontinued on September 30, 2002, is available on the GRE Web site at www.gre.org/edupubs.html.

Table 1B: Preliminary Analytical Writing Interpretive Data Used on Score Reports

(Based on the performance of examinees who tested between October 1, 2002, and June 30, 2003)

Score Levels	Percentage of Examinees Scoring Lower than Analytical Writing Score Levels
6	96
5.5	86
5	71
4.5	52
4	32
3.5	17
3	7
2.5	3
2	1
1.5	0
1	0
0.5	0
0	0
Number of Examinees	295,942
Mean	4.2
Standard Deviation	1.0

Table 1B above contains a preliminary analytical writing score distribution. The data are based ONLY on examinees who tested between October 1, 2002, and June 30, 2003 where 56% are women and 40% are men. It is likely the examinees on whom the percentiles were calculated scored higher on the analytical writing section than will be true of the entire GRE population because:

- examinees who cannot produce good analytical writing essays may have tested before analytical writing was added to the General Test, and/or
- examinees who do produce good analytical writing essays may have wanted to test between October and June to show their proficiency in this area on their applications.

One major difference in the October 2002 – June 2003 test-taking population is illustrated in the following chart, which shows that for the October 2002 – June 2003 time period, U.S. citizens whose primary language is English represent about 67% of the test takers, whereas in a more typical year, they represent only about 57% of the test takers.

Test-taker groups	October 2001– June 2002	October 2002– June 2003
U.S. citizens whose primary language is English	57%	67%
All other test takers	43%	33%

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

(Based on the performance of all examinees who tested between July 1, 2000, and June 30, 2003)

Percent of Examinees Scoring Lower than Selected Scaled Scores									
Scaled Score	Biochemistry, Cell and Molecular Biology*	Biology*	Chemistry	Computer Science	Literature in English	Mathematics (Rescaled)	Physics*	Psychology*	Scaled Score
980							97		980
960							96		960
940			99				95		940
920		99	98				92		920
900		99	96			99	90		900
880		98	93	98		98	88		880
860		97	90	95		96	86		860
840		95	87	91		94	83		840
820		93	83	84		92	81		820
800		91	78	78		89	78	99	800
780		88	74	71		87	74	98	780
760	99	84	69	63	99	83	71	97	760
740	99	80	65	55	98	79	67	94	740
720	97	75	59	47	97	74	63	91	720
700	96	70	55	41	95	69	59	86	700
680	94	64	50	34	91	65	54	81	680
660	91	58	44	28	88	60	50	75	660
640	87	52	39	22	83	55	45	69	640
620	82	44	33	18	77	50	41	62	620
600	77	38	28	14	71	44	37	55	600
580	71	32	22	10	64	40	32	48	580
560	65	26	18	7	56	34	27	40	560
540	58	20	13	5	49	30	22	33	540
520	51	15	9	3	41	23	18	27	520
500	43	11	6	2	34	19	13	21	500
480	36	8	4	1	27	15	10	16	480
460	28	5	2		21	11	6	12	460
440	22	3	1		16	8	4	8	440
420	16	2			11	5	1	6	420
400	11	1			8	3		4	400
380	8				5	1		2	380
360	5				3			1	360
340	3				1			1	340
320	2				1				320
300	1								300
280									280
260									260
240									240
220									220
200									200
Number of Examinees	8,805	15,879	8,963	10,579	10,818	7,942	10,947	26,991	Number of Examinees
Percent Women	52	63	42	20	64	31	23	76	Percent Women
Percent Men	47	36	57	79	36	68	76	23	Percent Men
Mean	517	635	682	712	538	620	669	580	Mean
Standard Deviation	100	114	125	97	98	131	151	101	Standard Deviation

* For additional data and interpretive information about subscores for these tests, see Table 3.

† For the Physics Test, the percent of examinees scoring lower than 990 is 98.

Table 3: Subject Test Interpretive Data for Subscores

(Based on the performance of all examinees who tested between July 1, 2000, and June 30, 2003)

Percent of Examinees Scoring Lower than Selected Scaled Scores									
Scaled Score	<i>Biochemistry, Cell and Molecular Biology</i>			<i>Biology*</i>			<i>Psychology</i>		Scaled Score
	<i>Biochemistry</i>	<i>Cell Biology</i>	<i>Molecular Biology and Genetics</i>	<i>Cellular and Molecular Biology</i>	<i>Organismal Biology</i>	<i>Ecology and Evolution</i>	<i>Experimental Psychology</i>	<i>Social Psychology</i>	
98									98
96									96
94					99				94
92				99	99				92
90				99	98	99			90
88				98	98	99			88
86				97	96	98			86
84				95	95	96			84
82				93	93	94			82
80				90	91	92	99		80
78				88	88	89	98	99	78
76	99	99		84	85	85	96	98	76
74	98	98	99	79	81	80	93	96	74
72	97	98	99	75	76	75	90	93	72
70	95	96	98	70	71	69	85	88	70
68	93	93	96	64	64	63	80	83	68
66	90	90	93	59	58	56	75	77	66
64	86	86	89	53	51	50	68	70	64
62	82	82	85	46	46	43	62	62	62
60	77	77	79	40	38	38	55	54	60
58	71	71	73	33	31	32	47	47	58
56	65	65	65	26	26	27	41	40	56
54	58	58	58	21	20	22	34	33	54
52	51	50	50	16	15	16	27	27	52
50	43	42	43	10	10	12	21	21	50
48	35	34	35	6	7	9	16	16	48
46	28	27	29	3	5	6	11	12	46
44	22	20	22	1	3	4	7	9	44
42	15	14	17	1	1	2	4	6	42
40	10	10	12		1	1	2	4	40
38	7	6	9				1	3	38
36	4	3	5					2	36
34	2	1	4					1	34
32	1		2					1	32
30			1						30
28									28
26									26
24									24
22									22
20									20
Number of Examinees	8,805			15,879			26,991		Number of Examinees
Mean	52	52	51	64	64	63	58	58	Mean
Standard Deviation	10	10	10	11	11	11	10	10	Standard Deviation
Total Score Mean	517			635			580		Total Score Mean
Standard Deviation	100			114			101		Standard Deviation

* For interpretive information on the Biology Test subscores earned prior to October 1, 1991, contact the GRE Program.

Department Code List for Use with Table 4

The following Department Code List contains the fields of study from which examinees select their intended graduate major. These fields are grouped into broad graduate major fields under seven branches of learning (Natural Sciences, Engineering, Social Sciences, Humanities and Arts, Education, Business, and Other Fields).

Table 4 (see pages 18-20) 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, Humanities and Arts, Education, Business, and Other Fields. Score data presented includes number of examinees (N), means, standard deviations (S.D.), and the percentage of students in each of seven score ranges for verbal and quantitative scaled scores. However, only the number of examinees is reported for the broad major field "Other" or the "Other Fields" grouping (e.g., the aggregation of Architecture and Environmental Design, Communications, Home Economics).

Note: The Natural Sciences category in the Department Code List is separated in Table 4 into Life Sciences (Agriculture, Biological Sciences, and Health and Medical Sciences) and Physical Sciences (Chemistry; Computer and Information Sciences; Earth, Atmospheric, and Marine Sciences; Mathematical Sciences; Physics and Astronomy; and Other).

NATURAL SCIENCES	Mathematical Sciences	2013 Psychopharmacology	Education — Special
Agriculture	0701 Actuarial Sciences	2014 Quantitative Psychology	3701 Education of Gifted Students
0101 Agricultural Economics	0702 Applied Mathematics	2015 Social Psychology	3702 Education of Handicapped Students
0102 Agricultural Production	0703 Mathematics	2099 Psychology — Other	3703 Education of Students with Specific Learning Disabilities
0103 Agricultural Sciences	0704 Probability & Statistics	Sociology	3704 Remedial Education
0104 Agronomy	0799 Mathematical Sciences — Other	2101 Demography	3705 Special Education
0105 Animal Sciences	Physics and Astronomy	2102 Sociology	3799 Special Education — Other
0106 Fishery Sciences	0801 Astronomy	Social Sciences — Other	Education — Student Counseling and Personnel Services
0107 Food Sciences	0802 Astrophysics	2206 American Studies	3801 Personnel Services
0108 Forestry and Related Sciences	0803 Atomic/Molecular Physics	2201 Area Studies	3802 Student Counseling
0109 Horticulture	0804 Nuclear Physics	2202 Criminal Justice/Criminology	Education — Other
0111 Parks and Recreation Management	0805 Optics	2203 Geography	3901 Adult and Continuing Education
0112 Plant Sciences (Except Agronomy, see 0104)	0808 Physics	2207 Gerontology	3908 Agricultural Education
0113 Renewable Natural Resources	0806 Planetary Science	2204 Public Affairs	3902 Bilingual/Crosscultural Education
0110 Resource Management	0807 Solid State Physics	2205 Urban Studies	3903 Educational Media
0114 Soil Sciences	0899 Physics and Astronomy — Other	2299 Social Sciences — Other	3904 Junior High/Middle School Education
0115 Wildlife Management	Natural Sciences — Other	HUMANITIES AND ARTS	3909 Physical Education
0199 Agriculture — Other	0999 Natural Sciences — Other	Arts — History, Theory, and Criticism	3905 Pre-Elementary Education
Biological Sciences	ENGINEERING	2301 Art History and Criticism	3906 Social Foundations
0201 Anatomy	Engineering — Chemical	2302 Music History, Musicology, and Theory	3907 Teaching English as a Second Language/Foreign Language
0221 Bacteriology	1001 Chemical Engineering	2399 Arts — History, Theory, and Criticism — Other	3910 Vocational/Technical Education
0202 Biochemistry	1002 Pulp and Paper Production	Arts — Performance and Studio	3999 Education — Other
0203 Biology	1003 Wood Science	2401 Art	BUSINESS
0204 Biometry	1099 Chemical Engineering — Other	2402 Dance	Accounting
0222 Biophysics	Engineering — Civil	2405 Design	4001 Accounting
0205 Botany	1101 Architectural Engineering	2403 Drama/Theatre Arts	4002 Taxation
0206 Cell and Molecular Biology	1102 Civil Engineering	2406 Fine Arts	Banking and Finance
0207 Ecology	1103 Environmental/Sanitary Engineering	2407 Industrial Design	4101 Commercial Banking
0208 Developmental Biology	1199 Civil Engineering — Other	2404 Music	4102 Finance
0209 Entomology and Parasitology	Engineering — Electrical and Electronics	2499 Arts — Performance and Studio — Other	4103 Investments and Securities
0210 Genetics	1202 Communications Engineering	English Language and Literature	Business Administration and Management
0211 Marine Biology	1201 Computer Engineering	2502 American Language and Literature	4201 Business Administration and Management
0212 Microbiology	1203 Electrical Engineering	2503 Creative Writing	4208 Hospitality Services Management
0213 Neurosciences	1204 Electronics Engineering	2501 English Language and Literature	4202 Human Resource Development
0214 Nutrition	1299 Electrical & Electronics Engineering — Other	2599 English Language and Literature — Other	4203 Institutional Management
0215 Pathology	Engineering — Industrial	Foreign Languages and Literatures	4204 Labor/Industrial Relations
0216 Pharmacology	1301 Industrial Engineering	2601 Asian Languages	4205 Management Science
0217 Physiology	1302 Operations Research	2609 Classical Languages	4206 Organizational Behavior
0218 Radiobiology	1399 Industrial Engineering — Other	2602 Foreign Literature	4207 Personnel Management
0219 Toxicology	Engineering — Materials	2603 French	4299 Business Management — Other
0220 Zoology	1401 Ceramic Engineering	2604 Germanic Languages	Business — Other
0299 Biological Sciences — Other	1402 Materials Engineering	2605 Italian	4301 Business Economics
Chemistry	1403 Materials Science	2606 Russian	4302 International Business Management
0302 Analytical Chemistry	1404 Metallurgical Engineering	2607 Semitic Languages	4303 Management Information Systems
0301 Chemistry, General	1499 Materials Engineering — Other	2608 Spanish	4304 Marketing and Distribution
0303 Inorganic Chemistry	Engineering — Mechanical	2699 Foreign Languages — Other	4305 Marketing Management and Research
0304 Organic Chemistry	1501 Engineering Mechanics	History	4399 Business — Other
0305 Pharmaceutical Chemistry	1502 Mechanical Engineering	2701 American History	OTHER FIELDS
0306 Physical Chemistry	1599 Mechanical Engineering — Other	2702 European History	Architecture and Environmental Design
0399 Chemistry — Other	Engineering — Other	2703 History of Science	4401 Architecture
Computer and Information Sciences	1601 Aerospace Engineering	2799 History — Other	4402 City and Regional Planning
0401 Computer Programming	1602 Agricultural Engineering	Philosophy	4403 Environmental Design
0402 Computer Sciences	1603 Biomedical Engineering	2801 All Philosophy Fields	4404 Interior Design
0403 Data Processing	1604 Engineering Physics	Humanities and Arts — Other	4405 Landscape Architecture
0404 Information Sciences	1605 Engineering Science	2901 Classics	4406 Urban Design
0405 Microcomputer Applications	1606 Geological Engineering	2902 Comparative Language and Literature	4499 Architecture and Environmental Design — Other
0406 Systems Analysis	1607 Mining Engineering	2903 Linguistics	Communications
0499 Computer Sciences — Other	1608 Naval Architecture and Marine Engineering	2904 Religious Studies	4501 Advertising
Earth, Atmospheric, and Marine Sciences	1609 Nuclear Engineering	2999 Humanities and Arts — Other	4502 Communications Research
0501 Atmospheric Sciences	1610 Ocean Engineering	EDUCATION	4503 Journalism and Mass Communications
0502 Environmental Sciences	1611 Petroleum Engineering	Education — Administration	4504 Public Relations
0503 Geochemistry	1612 Systems Engineering	3001 Educational Administration	4505 Radio, TV, and Film
0504 Geology	1613 Textile Engineering	3002 Educational Supervision	4506 Speech Communication
0505 Geophysics and Seismology	1699 Engineering — Other	Education — Curriculum and Instruction	4599 Communications — Other
0507 Meteorology	SOCIAL SCIENCES	3101 Curriculum and Instruction	Home Economics
0508 Oceanography	Anthropology & Archaeology	Education — Early Childhood	4601 Consumer Economics
0506 Paleontology	1701 Anthropology	3201 Early Childhood Education	4603 Family Counseling
0599 Earth, Atmospheric, and Marine Sciences — Other	1702 Archaeology	Education — Elementary	4602 Family Relations
Health and Medical Sciences	Economics	3302 Elementary Level Teaching Fields	4699 Home Economics — Other
0601 Allied Health	1802 Econometrics	Education — Evaluation and Research	Library and Archival Sciences
0602 Audiology	1801 Economics	3403 Educational Psychology	4702 Archival Science
0603 Chiropractic	Political Science	3401 Educational Statistics and Research	4701 Library Science
0604 Dental Sciences	1901 International Relations	3402 Educational Testing, Evaluation, and Measurement	Public Administration
0605 Environmental Health	1902 Political Science and Government	3404 Elementary and Secondary Research	4801 Public Administration
0606 Epidemiology	1903 Public Policy Studies	3405 Higher Education Research	Religion and Theology
0607 Health Science Administration	1999 Political Science — Other	3406 School Psychology	4903 Ordained Ministry/Rabinate
0608 Immunology	Psychology	Education — Higher	4901 Religion
0609 Medical Sciences	2001 Clinical Psychology	3501 Educational Policy	4902 Theology
0621 Medicinal Chemistry	2002 Cognitive Psychology	3502 Higher Education	Social Work
0610 Nursing	2003 Community Psychology	Education — Secondary	5001 Social Work
0618 Occupational Therapy	2004 Comparative Psychology	3601 Secondary Education	Other Fields
0611 Optometry	2005 Counseling Psychology	3602 Secondary Level Teaching Fields	5101 Interdisciplinary Programs
0612 Osteopathic Medicine	2006 Developmental Psychology		5102 Law
0613 Pharmaceutical Sciences	2007 Experimental Psychology		5199 Any Department Not Listed
0619 Physical Therapy	2008 Industrial and Organizational Psychology		
0614 Podiatry	2009 Personality Psychology		
0615 Pre-Medicine	2010 Physiological Psychology		
0616 Public Health	2011 Psycholinguistics		
0620 Speech/Language Pathology	2016 Psychology		
0617 Veterinary Medicine	2012 Psychometrics		
0622 Veterinary Science			
0699 Health and Medical Sciences — Other			

**Table 4: Verbal and Quantitative Percentage Distribution of Scores Within Intended Broad Graduate Major Field
Based on Seniors and Nonenrolled College Graduates†**

(Based on the performance of seniors and nonenrolled college graduates* who tested between July 1, 2000, and June 30, 2003)

	Score	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.
LIFE SCIENCES	Verbal	2.1	23.5	38.4	26.2	8.1	1.6	0.1	105,891	464	98
	Quantitative	1.2	6.4	16.6	28.1	29.3	15.9	2.5	105,865	580	121
Agriculture	Verbal	3.2	24.2	37.6	25.4	7.6	1.8	0.1	10,148	460	101
	Quantitative	1.0	4.5	14.5	28.8	30.8	15.9	4.4	10,146	593	118
Biological Sciences	Verbal	2.1	16.5	33.0	32.2	13.1	3.1	0.2	35,252	493	105
	Quantitative	0.5	2.9	9.1	21.8	34.2	26.5	5.0	35,249	630	112
Health and Medical Sciences	Verbal	2.0	27.5	41.7	22.8	5.2	0.7	0.0	60,491	448	89
	Quantitative	1.7	8.8	21.3	31.6	26.2	9.7	0.7	60,470	548	116
PHYSICAL SCIENCES	Verbal	5.2	20.7	25.3	28.5	15.9	4.2	0.2	55,003	488	122
	Quantitative	0.2	1.1	3.4	9.8	23.6	45.4	16.4	55,001	699	100
Chemistry	Verbal	3.3	17.7	30.8	30.6	14.0	3.5	0.1	7,686	490	111
	Quantitative	0.2	0.7	3.5	12.8	30.1	41.7	11.0	7,686	684	96
Computer and Information Sciences	Verbal	7.6	26.3	22.3	24.7	14.8	4.0	0.3	26,726	470	129
	Quantitative	0.3	1.3	3.1	8.2	21.4	48.8	16.8	26,728	705	100
Earth, Atmospheric, and Marine Sciences	Verbal	2.0	14.1	33.6	34.8	13.2	2.2	0.1	7,482	495	100
	Quantitative	0.3	2.3	8.4	21.3	36.2	27.6	4.0	7,479	634	106
Mathematical Sciences	Verbal	3.8	17.5	25.0	29.9	17.7	5.8	0.3	6,927	504	122
	Quantitative	0.0	0.3	1.3	4.6	17.2	49.6	27.0	6,926	734	77
Physics and Astronomy	Verbal	2.3	11.5	20.8	33.4	24.8	6.9	0.3	5,897	534	116
	Quantitative	0.0	0.2	0.8	3.9	15.7	53.4	26.0	5,897	740	71
Natural Sciences — Other	Verbal	2.5	15.8	37.9	27.7	14.0	2.1	0.0	285	488	101
	Quantitative	0.7	4.6	11.9	24.2	33.7	20.0	4.9	285	608	120
ENGINEERING	Verbal	6.0	25.0	26.8	27.0	12.1	3.0	0.1	56,751	468	119
	Quantitative	0.1	0.4	1.4	5.4	21.5	54.8	16.5	56,755	721	79
Chemical	Verbal	4.1	21.0	26.1	31.6	13.9	3.3	0.0	4,093	484	115
	Quantitative	0.0	0.2	1.0	4.4	19.8	58.4	16.1	4,093	727	73
Civil	Verbal	6.1	25.1	32.6	25.7	8.8	1.7	0.0	7,299	456	109
	Quantitative	0.1	0.5	1.8	8.3	28.4	50.6	10.3	7,300	702	84
Electrical and Electronics	Verbal	7.1	28.0	24.0	24.6	12.6	3.5	0.1	23,506	463	125
	Quantitative	0.1	0.3	1.2	4.5	18.7	55.3	19.9	23,507	729	76
Industrial	Verbal	7.1	34.6	27.1	20.1	8.9	2.2	0.1	3,964	440	115
	Quantitative	0.1	0.7	2.3	7.3	23.1	50.9	15.6	3,965	711	88
Materials	Verbal	3.5	18.0	25.3	32.1	16.0	5.1	0.1	2,059	498	119
	Quantitative	0.1	0.1	1.0	4.7	20.5	52.9	20.6	2,059	729	74
Mechanical	Verbal	6.4	23.9	27.7	27.5	11.8	2.6	0.1	7,154	468	117
	Quantitative	0.1	0.4	1.2	4.5	20.5	57.1	16.2	7,154	724	76
Other	Verbal	3.5	16.9	29.1	34.0	13.7	2.7	0.1	8,676	490	108
	Quantitative	0.1	0.3	1.6	5.8	24.1	55.5	12.5	8,677	714	80

† Data by broad major field for the analytical writing section of the General Test are available on the GRE Web site at www.gre.org/edupubs.html.

* Limited to those who earned their college degrees up to two years prior to the test date. Note that this table does not include summary information on approximately 57,432 examinees whose response to the department code question was invalid (misgrids, blanks, etc.) or the approximately 12,669 examinees whose response was "Undecided."

Table 4: Verbal and Quantitative Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates

	Score	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.
SOCIAL SCIENCES	Verbal	2.0	18.8	33.6	30.6	12.4	2.5	0.1	86,946	485	104
	Quantitative	2.4	9.4	19.1	27.5	25.1	14.2	2.3	86,937	559	130
Anthropology and Archaeology	Verbal	0.6	7.9	26.6	39.6	20.3	4.8	0.2	4,819	531	98
	Quantitative	1.4	7.0	18.7	30.4	28.5	13.1	0.9	4,820	565	116
Economics	Verbal	3.2	19.1	24.0	28.8	18.8	5.9	0.2	6,901	504	123
	Quantitative	0.1	0.8	2.6	9.4	23.2	46.5	17.2	6,904	706	94
Political Science	Verbal	1.5	11.6	26.7	35.9	19.8	4.4	0.2	15,788	520	106
	Quantitative	1.5	6.6	14.8	26.9	29.9	18.5	1.9	15,787	585	123
Psychology	Verbal	1.8	21.1	38.2	29.1	8.6	1.2	0.0	45,941	470	95
	Quantitative	2.5	10.7	22.1	30.5	24.4	9.2	0.6	45,930	538	120
Sociology	Verbal	3.8	18.0	31.9	31.6	11.9	2.6	0.3	3,875	483	108
	Quantitative	4.1	11.9	21.4	27.0	21.9	12.2	1.5	3,875	537	135
Other	Verbal	3.1	24.9	34.2	25.9	9.8	2.1	0.0	9,622	465	105
	Quantitative	5.1	13.9	22.5	26.1	21.6	9.5	1.3	9,621	523	135
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HUMANITIES AND ARTS	Verbal	1.2	8.5	22.4	36.1	24.4	7.0	0.5	42,893	541	107
	Quantitative	2.2	8.4	19.1	28.3	26.5	14.1	1.4	42,865	561	125
Arts — History, Theory, and Criticism	Verbal	0.8	8.4	23.8	38.4	22.9	5.4	0.3	3,289	537	102
	Quantitative	1.6	7.5	18.2	29.5	27.2	14.7	1.3	3,288	567	121
Arts — Performance and Studio	Verbal	3.2	16.9	31.7	32.7	12.9	2.6	0.1	6,700	487	106
	Quantitative	3.1	9.8	20.7	28.1	24.3	12.3	1.8	6,697	549	130
English Language and Literature	Verbal	0.5	5.4	20.0	38.1	27.9	7.7	0.5	15,188	557	99
	Quantitative	2.3	9.1	21.3	30.6	25.3	10.8	0.7	15,174	547	120
Foreign Languages and Literatures	Verbal	2.7	12.6	22.7	32.9	21.5	7.1	0.5	3,455	527	118
	Quantitative	2.1	7.5	17.3	27.4	29.5	14.6	1.6	3,454	569	123
History	Verbal	0.5	7.7	23.9	37.6	23.5	6.4	0.4	7,957	542	102
	Quantitative	2.4	9.8	20.6	28.1	25.4	12.7	1.0	7,953	551	125
Philosophy	Verbal	0.3	3.2	13.3	33.8	35.2	13.0	1.2	2,935	588	100
	Quantitative	0.6	2.6	9.5	20.8	33.4	29.1	4.1	2,931	632	112
Other	Verbal	1.6	8.3	17.3	33.6	28.3	10.2	0.8	3,369	557	114
	Quantitative	1.7	5.8	13.9	25.4	29.4	21.3	2.3	3,368	593	125
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EDUCATION	Verbal	2.4	28.3	39.1	23.4	5.9	0.9	0.0	39,052	450	93
	Quantitative	2.9	11.7	24.3	29.7	21.4	9.2	0.9	39,047	531	123
Administration	Verbal	3.7	35.6	39.1	17.0	4.0	0.6	0.0	2,736	429	90
	Quantitative	4.3	13.7	25.8	26.9	18.8	9.1	1.5	2,736	520	131
Curriculum and Instruction	Verbal	1.5	24.3	37.2	27.8	8.1	1.1	0.0	2,478	465	96
	Quantitative	2.3	9.3	21.8	29.5	24.6	10.9	1.6	2,478	548	123
Early Childhood	Verbal	3.7	37.0	40.6	15.4	2.9	0.5	0.0	1,261	423	84
	Quantitative	4.4	16.3	28.5	29.9	15.4	4.8	0.6	1,261	497	120
Elementary	Verbal	2.0	29.4	42.0	21.6	4.5	0.5	0.0	6,710	444	87
	Quantitative	2.5	11.9	25.5	32.4	20.8	6.5	0.3	6,709	523	115

Table 4: Verbal and Quantitative Percentage Distribution of Scores Within Intended Broad Graduate Major Field Based on Seniors and Nonenrolled College Graduates

	Score	200-290	300-390	400-490	500-590	600-690	700-790	800	N	Mean	S.D.
Evaluation and Research	Verbal	1.8	26.1	42.0	23.9	5.4	0.8	0.0	4,111	452	89
	Quantitative	2.1	11.3	25.0	31.6	21.0	8.2	0.7	4,111	531	118
Higher	Verbal	1.5	23.8	36.9	29.4	7.4	1.0	0.0	2,200	466	93
	Quantitative	2.5	10.2	23.1	27.3	24.7	11.2	1.0	2,200	544	125
Secondary	Verbal	0.8	17.0	36.6	33.2	10.6	1.6	0.0	7,547	486	94
	Quantitative	1.6	6.9	17.5	27.7	28.2	16.7	1.4	7,547	574	122
Special	Verbal	2.9	34.1	41.0	18.1	3.5	0.3	0.1	3,608	431	86
	Quantitative	3.9	15.5	29.0	31.4	15.5	4.3	0.3	3,608	498	115
Student Counseling and Personnel Svcs	Verbal	3.0	35.4	40.9	17.9	2.5	0.3	0.0	3,914	427	83
	Quantitative	4.5	16.1	28.4	30.2	16.1	4.4	0.3	3,914	496	118
Other	Verbal	4.6	34.1	35.0	19.4	5.6	1.3	0.0	4,487	436	99
	Quantitative	3.1	12.2	25.7	28.2	20.6	9.3	1.0	4,483	527	126
BUSINESS	Verbal	5.5	28.9	34.5	21.4	7.9	1.8	0.1	8,022	448	108
	Quantitative	3.0	8.5	14.9	21.9	22.5	22.0	7.3	8,021	591	147
Accounting	Verbal	10.6	32.8	32.4	14.7	7.8	1.0	0.7	293	425	114
	Quantitative	4.1	9.9	12.6	15.7	26.6	21.8	9.2	293	597	153
Banking and Finance	Verbal	5.7	23.9	27.2	21.9	16.3	4.9	0.2	1,008	480	127
	Quantitative	1.0	1.2	4.6	9.0	17.6	44.0	22.6	1,008	704	114
Business Administration and Management	Verbal	5.0	30.1	36.7	21.5	5.7	0.9	0.1	4,655	440	99
	Quantitative	3.7	10.9	18.0	25.8	22.1	15.7	3.7	4,654	558	142
Other	Verbal	5.6	28.1	33.2	21.6	9.0	2.5	0.0	2,066	452	112
	Quantitative	2.3	6.3	13.1	20.1	25.0	25.6	7.6	2,066	609	141
OTHER FIELDS	Verbal	—	—	—	—	—	—	—	57,373	—	—
	Quantitative	—	—	—	—	—	—	—	57,356	—	—
Architecture and Environmental Design	Verbal	3.1	20.0	33.6	29.7	11.4	2.0	0.1	8,079	477	105
	Quantitative	0.5	3.3	11.0	25.4	34.3	22.8	2.8	8,077	613	111
Communications	Verbal	2.7	21.9	35.5	28.6	9.5	1.7	0.1	15,289	470	101
	Quantitative	3.7	12.2	23.4	28.9	21.7	8.9	1.2	15,285	529	127
Home Economics	Verbal	3.1	32.5	42.3	18.4	3.4	0.3	0.0	1,016	432	84
	Quantitative	5.2	16.4	30.0	29.3	15.0	3.6	0.4	1,016	490	117
Library and Archival Sciences	Verbal	1.1	9.5	24.6	37.4	22.4	4.7	0.2	2,661	530	103
	Quantitative	3.3	11.2	23.6	29.5	22.3	9.3	0.8	2,661	533	124
Public Administration	Verbal	3.5	26.5	36.8	25.9	6.2	1.2	0.0	2,124	452	98
	Quantitative	5.8	16.2	22.6	26.4	20.3	8.1	0.7	2,123	510	133
Religion and Theory	Verbal	1.3	9.6	23.5	37.3	22.3	5.5	0.4	2,232	534	105
	Quantitative	2.2	7.4	15.3	25.4	30.9	17.4	1.4	2,229	578	127
Social Work	Verbal	5.2	34.7	36.3	19.4	4.0	0.4	0.0	9,509	428	92
	Quantitative	9.0	22.4	28.0	24.1	13.0	3.1	0.4	9,506	464	125
Other	Verbal	—	—	—	—	—	—	—	16,463	—	—
	Quantitative	—	—	—	—	—	—	—	16,459	—	—

Table 5: Reliability Coefficients and Standard Errors of Measurement for Individual Scores and Score Differences

Score	Reliability Coefficient ^a		Standard Error of Measurement				Size of Test Analysis Sample
			Individual Scores		Score Differences		
	Total Score	Subscore	Total Score	Subscore	Total Score	Subscore	
GENERAL TEST							
Verbal Measure ^b	.92		34		47		
Quantitative Measure ^b	.92		41		58		
Analytical Writing Measure ^c	.72		.47 ^d		.66		
SUBJECT TEST*							
Biochemistry (Total Score)	.94		23		32		924
Biochemistry		.86		3.4		4.9	924
Cell Biology		.86		3.4		4.9	924
Molecular Biology and Genetics		.84		3.6		5.1	924
Biology (Total Score)	.94		27		38		2106
Cellular and Molecular Biology		.87		4.1		5.9	2106
Organismal Biology		.86		4.2		6.0	2106
Ecology and Evolution		.87		4.1		5.8	2106
Chemistry	.94		24		34		1070
Computer Science	.90		29		41		1992
Literature in English	.95		19		27		1645
Mathematics (Rescaled)	.93		36		51		891
Physics	.93		37		53		969
Psychology (Total Score)	.95		23		32		4563
Experimental Psychology		.90		3.1		4.4	4563
Social Psychology		.87		3.5		5.0	4563

^a The reliability coefficients for the Subject Tests were computed by Kuder-Richardson formula (20) adapted for use with formula scores.

^b The reliability for the verbal and quantitative measures of the General Test is based on the median of twelve recent computer-based pools. The reported Standard Error of Measurement is based on the pool that had the median reliability. Both reliability and Standard Error of Measurement are calculated using simulated data. The reliability estimates for the paper-based version of the measures are comparable to the values for the computer-based versions of the measures presented in the table.

^c The reliability of the analytical writing measure total score was computed using data from a special study in which some examinees responded to two Issue prompts and some responded to two Argument prompts. The reliability was computed from the covariances of scores on prompts of the same type. This reliability is in the expected range of reliability for a two-essay test. These standard errors of measurement were computed using data from a research study.

^d The standard error of scoring for the analytical writing measure total score is .22. This was computed using data from a research study.

^e The reliabilities for the Subject Test total scores are each the median of five recent editions. The reported Standard Error of Measurement, sample sizes, and Subject Test subscore reliabilities (if applicable) are based on the test edition that had the median reliability.

Table 6A: Conditional Standard Errors of Measurement at Selected Scores for General Test Measures*

Measure	200	250	300	350	400	450	500	550	600	650	700	750	800
Verbal	9	18	22	28	33	36	37	33	34	35	34	32	20
Quantitative	22	38	43	47	48	47	46	43	38	34	30	22	8

Table 6B: Conditional Standard Errors of Measurement of Difference Scores at Selected Scores for General Test Measures*

Measure	200	250	300	350	400	450	500	550	600	650	700	750	800
Verbal	13	25	31	40	47	51	52	47	47	49	48	46	28
Quantitative	31	53	61	66	68	67	64	61	54	48	42	31	11

* The computer-based pools used to compute the CSEMs and the CSEMs of difference scores are the same as those on which the reliability estimates in Table 5 are based. Conditional standard errors of measurement for analytical writing are not available at this time.

Table 7: Average Estimated Correlations of GRE General Test (Verbal, Quantitative, and Analytical) Scores and Undergraduate Grade Point Average with Graduate First-Year Grade Point Average by Department Type

Type of Department	Number of Departments	Number of Examinees	Predictors						
			V	Q	A	U	VQA	VQAU	
All Departments	1,038	12,013	.30	.29	.28	.37	.34	.46	
Natural Sciences	384	4,420	.28	.27	.26	.36	.31	.44	
Engineering	87	1,066	.27	.22	.24	.38	.30	.44	
Social Sciences	352	4,211	.33	.32	.30	.38	.37	.48	
Humanities & Arts	115	1,219	.30	.33	.27	.37	.34	.46	
Education	86	901	.31	.30	.29	.35	.36	.47	
Business	14	196	.28	.28	.25	.39	.31	.47	

V = GRE Verbal, Q = GRE Quantitative, A = GRE Analytical, U = Undergraduate grade point average

The departments included in these analyses participated in the GRE Validity Study Service between 1986 and 1990. A minimum of 10 departments and 100 examinees in any departmental grouping were required for inclusion in the tables.

Table 8: Average Estimated Correlations of GRE General Test (Verbal, Quantitative, and Analytical) and Subject Test Scores and Undergraduate Grade Point Average with Graduate First-Year Grade Point Average for Departments by GRE Subject Test

GRE Subject Test	Number of Departments	Number of Examinees	Predictors								
			V	Q	A	S	U	SU	VQA	VQAU	VQASU
Biology	52	369	.24	.24	.22	.37	.33	.43	.27	.38	.45
Chemistry	26	298	.27	.25	.23	.51	.36	.58	.30	.43	.63
Literature in English	20	238	.23	.29	.26	.32	.34	.47	.29	.41	.54
Physics	24	314	.19	.13	.18	.27	.28	.45	.20	.31	.49
Psychology	110	1,151	.29	.29	.28	.37	.37	.46	.33	.44	.50

V = GRE Verbal, Q = GRE Quantitative, A = GRE Analytical, S = GRE Subject Test, U = Undergraduate grade point average

The departments included in these analyses participated in the GRE Validity Study Service between 1986 and 1990. A minimum of 10 departments and 100 examinees in any departmental grouping were required for inclusion in the tables.

Note: The composites (i.e., VQA, VQAU, SU, and VQASU) presented in Tables 7 and 8 are *not* simple sums of predictor variables. Instead, each predictor is multiplied (weighted) by a number (coefficient) that varies for each predictor and then added together. The *unique* coefficients to be used for an individual department are obtained by conducting a validity study. Empirical Bayes regression is used to determine the best combination of information from an individual department and from a larger pool of departments. The resultant coefficients for a department provide a better estimate of the linear weighting of the predictor variables than can be obtained from using only the department information. This is especially true for departmental data with only five examinees when traditional analyses (e.g., least squares regression) are not at all appropriate.

Score Level Descriptions for the Analytical Writing Section of the General Test*

Although the GRE analytical writing section contains two discrete analytical writing tasks, a single combined score is reported because it is more reliable than is a score for either task alone. The reported score, the average of the scores for the two tasks, ranges from 6 to 0, in half-point increments.

The statements below describe, for each score level, the overall quality of analytical writing demonstrated across both the Issue and Argument tasks. Because the test assesses “analytical writing,” critical thinking skills (the ability to reason, assemble evidence to develop a position, and communicate complex ideas) weigh more heavily than the writer’s control of fine points of grammar or the mechanics of writing (e.g., spelling).

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 language 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 language usage but may have minor errors that do not interfere with meaning.

SCORES 4 and 3.5 – Provides competent analysis of complex ideas; develops and supports main points with relevant reasons and/or examples; is adequately organized; conveys meaning with reasonable clarity; demonstrates satisfactory control of sentence structure and language usage but may have some errors that affect clarity.

SCORES 3 and 2.5 – Displays some competence in analytical writing, 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 language usage, with errors that often result in vagueness or 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; lack of organization; serious and frequent problems in sentence structure or language usage, with errors that obscure meaning.

SCORES 1 and .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 0 – The examinee’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 examinee produced no text whatsoever.

*These score level descriptions are also for the Writing Assessment that was discontinued in December 2002.

2004-2005 GRE Testing Calendar

Computer-Based Testing

The computer-based General Test is administered year round in many areas of the world.

Score reports for computer-based administrations are released approximately 10-15 days after the test date.

Visit GRE Online at www.gre.org

Paper-Based Testing

Paper-based General Test administrations are offered in areas of the world where computer-based testing is not available. Visit the GRE Web site for information on paper-based testing in these locations.

Score reports for paper-based administrations are released within 4 to 6 weeks after the test date (see below).

GENERAL TEST		SUBJECT TESTS	
Test Dates	Approximate Score Report Mailing Dates	Test Dates	Approximate Score Report Mailing Date
October 23, 2004	December 3, 2004	November 13, 2004	December 23, 2004
March 12, 2005 ^a	April 22, 2005	December 11, 2004 ^c	January 14, 2005
June 11, 2005 ^b	July 23, 2005	April 2, 2005 ^{c,d}	May 6, 2005

^a No testing in China (including Hong Kong), Korea, and Taiwan.

^b Testing in China (including Hong Kong), Korea, and Taiwan only.

^c No testing in India, China (including Hong Kong), and Taiwan.

^d The Computer Science Test will not be offered.

