

Applying to Grad School

General advice:

- Talk with faculty friends/mentors about you(!).
- Talk with grads/postdocs about their experiences.
- Leave yourself enough time to write good applications.
- For the physics GRE: practice, practice, practice!
- Explore options in astronomy/physics/Earth science.
- Don't apply to all the same schools that your friends are.
- Apply to 6-8 schools in 3 categories: certain/good/hope.

The Grad School Experience

- There is a spot for you somewhere!
- You probably don't have to pay tuition and you probably get a stipend as a fellow, TA or RA.
- You probably will take courses for 1-2 years; they will be tough.
- Having a TA-ship early on is not a bad idea.
- Most grad students work hard but have a good time.
- Getting a job afterwards is not easy, but
 1. It is far from impossible and
 2. That's a long way off...

Senior Year Timeline: I.

- Summer/early Fall of Senior year:
 - Check out GRE website (www.gre.org)
 - **New questions/format** introduced in 2011; read the most up-to-date material! Includes writing.
 - Start practicing for (1) general and (2) subject test
 - Consider taking general GRE test (computer based) sooner rather than later to get it over with!
 - Sites in East Syracuse, Binghamton, Rochester
 - Start checking out school web sites
 - Start asking advice on school programs/options

General GRE info from 2012)



Revised General Test

About the Test

Test Content and Structure

▶ Computer-based Test

Paper-based Test

ScoreSelect Option

GRE for Business School

Test Fairness and Validity

Fees

Bulletin and Forms

Tools for Success

Register for the Test

Prepare for the Test

On Test Day

Scores

Frequently Asked Questions

Subject Tests

Computer-based GRE® revised General Test Content and Structure

The overall testing time for the computer-based GRE® revised General Test is about three hours and 45 minutes. There are six sections with a 10-minute break following the third section.

Structure of the Computer-based Test

Measure	Number of Questions	Allotted Time
Analytical Writing (One section with two separately timed tasks)	One "Analyze an Issue" task and one "Analyze an Argument" task	30 minutes per task
Verbal Reasoning (Two sections)	20 questions per section	30 minutes per section
Quantitative Reasoning (Two sections)	20 questions per section	35 minutes per section
Unscored¹	Varies	Varies
Research²	Varies	Varies

¹An unidentified unscored section that does not count toward your score may be included and may appear in any order after the Analytical Writing section. Questions in the unscored section are being tried out either for possible use in future tests or to ensure that scores on new editions of the test are comparable to scores from earlier editions.

²An identified research section that is not scored may be included in place of the unscored section. The research section will always appear at the end of the test. Questions in this section are included for ETS research purposes and will not count toward your score.


The Analytical Writing section will always be first. The Verbal Reasoning, Quantitative Reasoning and unidentified/unscored sections may appear in any order; therefore, you should treat each section as if it counts toward your score.

Test Design Features

The GRE revised General Test design features advanced technology that allows you to freely move forward and backward throughout an entire section. Specific features include:

- Preview and review capabilities within a section
- A "mark and review" feature to tag questions, so you can skip them and return later if you have time remaining in the section
- The ability to change/edit answers within a section
- An on-screen calculator for the Quantitative Reasoning section
- New answer formats, including tasks such as numeric entry and highlighting a sentence in a passage to answer a question

General GRE info (from 2012)

← → www.ets.org/gre/revisted_general/prepare ☆  GRE test

Revised General Test

- About the Test
- Register for the Test
- **Prepare for the Test**
 - Analytical Writing
 - Verbal Reasoning
 - Quantitative Reasoning
 - POWERPREP II Software
 - Materials in Accessible Formats
 - Strategies and Tips
- On Test Day
- Scores
- Frequently Asked Questions

Subject Tests

Prepare for the GRE® revised General Test

We offer a variety of free and low-cost tools to help you prepare for the GRE® revised General Test so you can feel more confident on test day.

Since the GRE revised General Test, which was introduced in August 2011, features a new design and new question types, using test prep for the prior version of the GRE® General Test is not recommended. The good news is FREE official test prep materials are available right here.

If you have a disability and need test preparation materials in accessible formats, visit our [Materials in Accessible Formats page](#).

Free GRE revised General Test Preparation Materials

A quick view of the question types

- [Verbal Reasoning Question Types](#)
- [Quantitative Reasoning Question Types](#)
- [Analytical Writing Question Types](#)

A closer look at the three sections of the test

View general advice, sample questions with rationales, scoring guides and tips for answering question types to become familiar with each of the test sections:

- [Verbal Reasoning](#)
- [Quantitative Reasoning](#)
- [Analytical Writing](#)

New! POWERPREP® II, Version 2.0 Software: Preparation for the computer-based GRE revised General Test

In addition to the sample questions, strategies and tips available here on this site, this free software also includes two full-length practice tests. These timed tests simulate the test taking experience, including the test-taker friendly design features like moving back and forth and changing answers within a section, as well as the on-screen calculator.*

[Learn more about POWERPREP II, Version 2.0 Software >](#)

Practice Book for the Paper-based GRE® revised General Test, Second Edition

Download this publication for a simulated test-taking experience of the paper-based GRE revised General Test. You'll get the following: one full-length paper-based test, test-taking strategies, sample Verbal Reasoning and Quantitative Reasoning questions with explanations, sample Analytical Writing topics, scored Analytical Writing responses and reader commentary and information on how the test is scored.

Senior Year Timeline: II.

- **September/October of Senior year:**
 - Talk with local adviser about process, schools, letters of reference, experiences of grads of your school
 - Check out fellowship websites (NSF, Zonta, etc)
 - Register for subject(=physics) GRE test (Oct or Nov!)
 - **Oct 13th, 2012, register by Sep 7th**
 - **Nov 10th, 2012, register by Oct 5th**
 - **Register earlier to get site choice!**
 - Take the general GRE test, if you haven't yet.
 - Gather application materials

Subject test (physics) GRE info

Subject Tests

About the Tests

Register for a Test

▶ Test Centers and Dates

Disability
Accommodations

Testing
Accommodations

Change or Cancel
Registration

Prepare for a Test

On Test Day

Scores

Frequently Asked Questions

Test Centers

The GRE® Subject Tests are offered at paper-based test centers worldwide. Choose a date and location to get started with your registration.

- For testing locations, view or download the [Test Center List \(PDF\)](#). Note that not all test centers are open on all test dates. The Test Center List is updated monthly throughout the year. For the most up-to-date list, check the [online registration system](#).
- Make sure you check the score report mailing date below when selecting a test date so your scores will be received in time to be considered with your application.
- You may take Subject Tests as often as they are offered.

2012–13 Test Dates

Note: All deadlines below are registration receipt dates at ETS.

For Testing in the United States and Puerto Rico

Test Dates (MM/DD/YY)	Regular Registration Deadline (MM/DD/YY)	Late Registration Deadline ¹ (MM/DD/YY)	Supplementary Test Center and Monday Administration Registration Deadline ² (MM/DD/YY)	View Scores Online and Scores by Phone Date (MM/DD/YY)	Approximate Score Report Mailing Date (MM/DD/YY)
10/13/12	09/07/12	09/14/12	08/24/12	11/12/12	11/23/12
11/10/12	10/05/12	10/12/12	09/21/12	12/10/12	12/21/12
04/20/13	03/15/13	03/22/13	03/01/13	05/20/13	05/31/13

For Testing in All Other Locations, Including U.S. Territories

Test Dates (MM/DD/YY)	Regular Registration Deadline (MM/DD/YY)	Late Registration Deadline ¹ (MM/DD/YY)	Supplementary Test Center and Monday Administration Registration Deadline ² (MM/DD/YY)	View Scores Online and Scores by Phone Date (MM/DD/YY)	Approximate Score Report Mailing Date (MM/DD/YY)
10/13/12	08/31/12	09/07/12	08/17/12	11/12/12	11/23/12
11/10/12	09/28/12	10/05/12	09/14/12	12/10/12	12/21/12
04/20/13	03/08/13	03/15/13	02/22/13	05/20/13	05/31/13

¹Late registration is available for online registration only for a fee of US\$25. Late registration closes one week after the regular registration deadline.

²Monday test dates will be October 15, 2012, November 12, 2012 and April 22, 2013.

Subject test (physics) GRE info


ETS GRE Subject Tests: Physics

www.ets.org/gre/subject/about/content/physics

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SEARCH: ETS.ORG

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FOR TEST TAKERS

ETS Home > GRE > Subject Tests > About the Tests > Test Content and Structure

Revised General Test

Subject Tests

About the Tests

- Test Content and Structure
- ScoreSelect Option
- Test Fairness and Validity
- Fees
- Bulletin and Forms
- Tools for Success

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Physics Test

Overview

- The test consists of approximately 100 five-choice questions, some of which are grouped in sets and based on such materials as diagrams, graphs, experimental data and descriptions of physical situations.
- The aim of the test is to determine the extent of the examinees' grasp of fundamental principles and their ability to apply these principles in the solution of problems.
- Most test questions can be answered on the basis of a mastery of the first three years of undergraduate physics.
- The International System (SI) of units is used predominantly in the test. A table of information representing various physical constants and a few conversion factors among SI units is presented in the test book.
- The approximate percentages of the test on the major content topics have been set by the committee of examiners, with input from a nationwide survey of undergraduate physics curricula. The percentages reflect the committee's determination of the relative emphasis placed on each topic in a typical undergraduate program. These percentages are given below along with the major subtopics included in each content category. In each category, the subtopics are listed roughly in order of decreasing importance for inclusion in the test.
- Nearly all the questions in the test will relate to material in this listing; however, there may be occasional questions on other topics not explicitly listed here.

Content Specifications

- CLASSICAL MECHANICS — 20%**
(such as kinematics, Newton's laws, work and energy, oscillatory motion, rotational motion about a fixed axis, dynamics of systems of particles, central forces and celestial mechanics, three-dimensional particle dynamics, Lagrangian and Hamiltonian formalism, noninertial reference frames, elementary topics in fluid dynamics)
- ELECTROMAGNETISM — 18%**
(such as electrostatics, currents and DC circuits, magnetic fields in free space, Lorentz force, induction, Maxwell's equations and their applications, electromagnetic waves, AC circuits, magnetic and electric fields in matter)
- OPTICS AND WAVE PHENOMENA — 9%**
(such as wave properties, superposition, interference, diffraction, geometrical optics, polarization, Doppler effect)
- THERMODYNAMICS AND STATISTICAL MECHANICS — 10%**
(such as the laws of thermodynamics, thermodynamic processes, equations of state, ideal gases, kinetic theory,



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New in July — ScoreSelectSM Option

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Nobody knows our tests better than we do. We offer free practice tests and tips to help you prepare for your GRE Subject Test.

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Subject test (physics) GRE info

ETS GRE Subject Tests: Prepare for a Test


www.ets.org/gre/subject/prepare/

ETS HOME | GRE HOME | FOR TEST TAKERS | FOR INSTITUTIONS

SEARCH: ETS.ORG

Go

MY GRE ACCOUNT | STORE | FAQs | CONTACT US



FOR TEST TAKERS

ETS Home > GRE > Subject Tests > Prepare for the Test

Revised General Test

Subject Tests

- About the Tests
- Register for a Test
- > Prepare for a Test**
 - Strategies and Tips
- On Test Day
- Scores
- Frequently Asked Questions

Prepare for a GRE® Subject Test

Free, official test preparation materials for the GRE® Subject Tests are available to anyone who registers for the tests worldwide or who visits this website. If you have a disability or health-related need and require test preparation material in an alternate format, contact [ETS Disability Services](#).


Subject Test Materials

Each Subject Test practice book contains a full-length test and answer key, test-taking strategies, and information to help you understand how the test is scored. The appropriate practice book is sent to individuals who register for a Subject Test, or you may download them here:

- [Biochemistry, Cell and Molecular Biology \(PDF\)](#)
- [Biology \(PDF\)](#)
- [Chemistry \(PDF\)](#)
- [Computer Science \(PDF\)](#)
- [Literature in English \(PDF\)](#)
- [Mathematics \(PDF\)](#)
- [Physics \(PDF\)](#)
- [Psychology \(PDF\)](#)

See also:

- [Test Content and Structure](#)



Ready to take a GRE® Subject Test?

[Register Now >](#)

New in July — ScoreSelectSM Option

[Learn more >](#)

Test Prep from ETS

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[Learn more >](#)

Taking the Physics GRE

- 100 multiple choice (5 possible answers) questions in 150 minutes, covering a broad sweep of undergrad physics
- You get penalized for a wrong answer (negative points) and get no points if you skip a question.
- Ira Wasserman took the (downloaded) test in 2003 (as an experiment). He answered only 66 questions but got only 8 wrong. He scored in the 91st percentile!
- You need to PRACTICE (...PRACTICE... PRACTICE) when to skip and when to guess.
- Practicing the best strategy can really help!

Don't try to answer all 100 questions!

Senior Year Timeline: III.

- October/November of Senior year:
 - Start applications for fellowships
 - Talk with other reference letter writers
 - Talk with postdocs, grad students
 - Begin to narrow your choices
 - If you are not an "A" student:
 - Apply to a range of schools
 - Understand your chances/choices
 - Don't apply only to the "usual suspects"

Choosing Letter Writers

- PhD's who know you!
- At least one who taught you in an upper level course in physics/math/astro
- Talk to each one about your goals and aspirations; ask each for his/her advice.
- Make sure you provide each of them with your latest information about classes, grades, test scores, research experience, career goals

Personal statement: keep it professional

Focus on your "career" as a scientist, e.g. research experience, educational background, scientific interests

Support for a graduate student per year includes:

- Tuition at Cornell that is about \$30K
- Stipend at Cornell that is about \$35K (1st year)
- Other at Cornell, health insurance is about \$1.8 K
~ \$70+ K total (including travel, computers etc)

Multiply that by 5+ years and you get the ??

"WHY YOU SHOULD INVEST \$350K+ IN ME"

Personal statement: keep it professional

Focus on your “career” as a scientist, e.g. research experience, educational background, scientific interests

- Limit discussion of non-professional activities except where they show development of leadership, intellectual breadth, discipline
- Give some details, e.g., write a paragraph about what you are doing this summer:
 - *My project was focused on assessing the impact of environment on galaxies in the region of the rich group ZwCl1400.4+0949. In addition to examining the large scale structure and establishing group membership, I evaluated the published methods of deriving stellar masses from optical (SDSS) and UV (GALEX) photometry (e.g. Bell et al.; MPA-JHU compilation, etc) and how the astrophysical assumptions behind them may (or may not) apply to HI-based galaxy samples. I developed code in the IDL environment and learned to access public databases using VO tools including TOPCAT.*

"Statement of Purpose"

- Write **professionally!**
- Summarize your education and especially your research experience, less so other extracurricular activities unless they are exceptional (Olympics, etc)
- Address any "rough spots" in your academic record.
- State what your career objectives are (professor, research scientist, observatory staff, etc). Theory? Observation? Numerical simulations? You will ****not**** be held to whatever you write here!
- Mention some research area(s) of interest. You do not have to choose, but show that ****something**** is really interesting to you.
- In describing your research experience or scientific interests, be as specific as you can. Provide some scientific details to show that you know what you are talking about.
- Make sure it is clear why the school to which you are applying is a good match to your background and goals.
- Mention individual faculty at the school whose research is interesting to you.

Senior Year Timeline: IV.

- Late October/Nov/Dec of Senior year:
 - Draft application
 - "Statement of purpose"
 - Vita/résumé (even if not required)
 - Give each letter writer a "package"
 - List of schools with addresses, deadlines, on-line/paper forms/no form [Help your writers search their emails...]
 - Addressed, stamped envelopes for paper submissions (few these days)
 - Your résumé, transcript, scores, statement

Senior Year Timeline: V.

- December/January of Senior year:
 - Submit applications
 - Do not wait until the last minute unless you have a good reason
 - Check with schools for missing items!

Senior Year Timeline: VI.

- Feb-Mar of Senior year:
 - Start receiving offers (or ...)
 - Visit schools you still seriously consider
 - Investigate financial aid offer, living expenses, academic program, "karma"
 - Notify schools you do not intend to attend as soon as you can, so that they might offer your spot to someone else.
- 15 April: it's all over....

Taking a year off

- Apply now anyway!
 - It is always easier to apply when you are still at your undergraduate school.
 - You may change your mind once you have received an offer.
 - If you are accepted, you can then ask for your admission to be deferred.
 - Do not discuss deferral until you are accepted.
 - A scientific/educational experience will be viewed more favorably than a vacation.
 - ~half of "deferrees" end up not attending the grad school which deferred them (so anticipate some skepticism...)