

- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)
- TOEFL score (if necessary)
- Academic letters of recommendation
- Letter of intent or statement of purpose, essays
- Application forms
- Application fee

Some degree programs will also require:

- Curriculum vitae
- GRE Subject Test: Literature in English
- Academic writing samples

MATHEMATICS AND STATISTICS

Mathematics is a unique field that requires more than just a mastery of existing techniques and theories; it actually gives mathematicians the opportunity to discern the need for and test the creation of new theories.

The advanced study of mathematics and statistics develops problem solving and critical thinking skills that are sought after and applied in many different career paths. An advanced degree in mathematics or statistics is required for university-level teaching and advanced research.

When looking for graduate programs, know that academic institutions vary the way they structure their programs and departments. Some statistics departments are housed within the mathematics department while others are separate. Some schools break out applied mathematics to differentiate it from “pure” mathematics. While not all professionals agree on the exact distinctions, applied math generally refers to the mathematical methods used in specific areas such as business, science and engineering, or industries like insurance, health care, and finance. Applied math often results in the development of new mathematical models, which are in turn studied in pure mathematics, which covers more theory and generalities.

As a pure mathematician, career opportunities are more competitive unless the degree is coupled with an area of industry focus. Some careers that benefit from advanced math and stats knowledge are physics, actuarial science, biostatistics, engineering, operations research, computer science, marketing, business and industrial management, economics, finance, chemistry, geology, life sciences, behavioral sciences, and many other fields.

Quick Snapshot: Mathematics and Statistics

SAMPLE DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	DEGREE OPTIONS	APPLICATION CONSIDERATIONS
Applied Mathematics	Master's: 99 Doctorate: 56	MA, MS PhD	Recommend background in linear algebra, real analysis, probability or statistics, theoretical computer science.
Computational Mathematics	Master's: 13 Doctorate: 12	MS PhD	Often combined with applied mathematics, heavy focus on developing computer models.
Mathematics	Master's: 326 Doctorate: 158	MA, MS PhD	Math background, incl. Abstract Algebra and Advanced Calculus. Some have minimum GPA requirements.
Statistics	Master's: 131 Doctorate: 65	MS PhD	Prerequisites include Calculus, Linear Algebra, Statistics, and knowledge of a programming language.

Source: IPEDS

Degrees Offered in Mathematics and Statistics

Master's degrees can be pursued on their own, but are also pursued by doctoral candidates in other related fields such as computer science, engineering fields, physics, business, finance, etc. Schools often have thesis and non-thesis options, which in some cases means the MA option is non-thesis and the MS option is thesis track, but this is not always the case. Other schools track the MA option for secondary school or community college-level teaching, but again, programs vary. Read the department descriptions about each option to see how it best fits your intended career path. Degree options include:

- MS or MA Mathematics (12–24 months)
- MS or MA Applied Mathematics (12–24 months)
- MS or MA Statistics (12–24 months)
- PhD Mathematics (4–6 years)
- PhD Statistics (4–6 years)

The PhD track is best suited for teaching and research at the university level, or for quantitative research and development in industry or government.

TRADE ORGANIZATIONS YOU SHOULD KNOW

American Mathematical Society (AMS) ams.org	A rich resource for news and events, publications, jobs, and research (as you might expect, AMS has lots of data and statistics on education and careers in mathematics).
Data.gov	A website run by the federal government; its goal is

	to make executive branch data sets accessible and available to the public. Among other things, it encourages app development and community interaction by area, such as energy or health.
Society for Industrial and Applied Mathematics siam.org	SIAM's mission is to build cooperation between mathematics and the worlds of science and technology through publications, research, and community.

Typical Admissions Requirements

- Minimum GPA
- Major in math, statistics, or related area with a background in calculus (multivariate, probability) and linear algebra

Some programs require the GRE Subject Test in Mathematics.

Some graduate programs in mathematics (typically pure math PhD track) have a foreign language requirement, particularly in French, Russian, or German. Many programs require knowledge of a programming language.

General Graduate School Requirements

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores* (different programs require different minimum scores)
- TOEFL score (if necessary)

- Letters of recommendation
- Letter of intent or statement of purpose
- Writing samples
- Application forms
- Application fee

*Not required for all programs

PHYSICAL AND EARTH SCIENCES

A highly analytical and research-intensive area, the physical and earth sciences attempt to understand the universe and everything in it: the Earth's atmosphere, the earth itself and its oceans, right on down to subatomic particles.

To observe, measure, interpret, and develop theories, the understanding and use of mathematics is a critical component to these sciences. Knowledge gained in research is used to design new technologies. Many of these scientists opt to apply their skills in engineering.

For most jobs in physical and earth sciences, an advanced degree is required. Enrollment, as well as the number of degrees conferred, has shown consistent growth to fill these jobs. Projected job growth is forecasted to average 8 percent in all areas (2014–2024 projection), but closer examination shows more competition in areas like chemistry (the largest field in the group), and very good job opportunities in hydrology and geosciences. Funds from the federal government are helping to boost job growth in the physical sciences as well. In 2007, Congress passed the America COMPETES Act (reauthorized by Congress in 2010), which funds government

agencies employing physical scientists to boost the nation's standing in technology and innovation.

Typical Admissions Requirements

Without an undergraduate degree in the same field, which many programs will require, a strong background in the physical sciences and mathematics is preferred, and is the best preparation for graduate school. In addition to the GRE, schools may require the GRE subject test in Chemistry or Physics.

Given the research-oriented nature of a graduate degree in physical sciences, be sure to do your homework about the areas of research among the faculty, so you can tailor your letter of intent or statement of purpose to the research or specialty you want to pursue in graduate school.

Quick Snapshot: Physical & Earth Sciences

SAMPLE DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	DEGREE OPTIONS	APPLICATION CONSIDERATIONS (*required or recommended)
Astronomy	Master's: 30 Doctorate: 28	MS PhD	Astronomy major or strong background in physics*
Chemistry	Master's: 320 Doctorate: 209	MS PhD	Chemistry major* GRE Subject Test in Chemistry
Geological and Earth Sciences	Master's: 210 Doctorate: 123	MS PhD	Background in chemistry, physics, calculus; specific pre-reqs based on area of focus
Physics	Master's: 257 Doctorate: 187	MS PhD	Physics major,* GRE Subject Test in Physics

TRADE ORGANIZATIONS YOU SHOULD KNOW

American Chemical Society acs.org	Publishes numerous scientific journals and databases, convenes major research conferences, and provides educational, science policy, and career programs in chemistry. Also grants more than \$22 million in funds for basic research.
---	--

American Institute of Hydrology aihydrology.org	Establishes the standards for the certification of hydrologists; encompasses both student and professional chapters.
American Institute of Physics aip.org	Umbrella society for physicists and astronomers, students, and teachers of those subjects. Publishes journals, and website lists valuable resources and job postings.
American Meteorological Society ametsoc.org	Provides certification, as well as a wealth of information about the field including job postings and grants.
American Physical Society aps.org	Second largest organization of physicists which hosts meetings, publishes journals, and provides career information through its website.

General graduate school requirements:

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)
- TOEFL score (if necessary)
- Academic letters of recommendation
- Letter of intent or statement of purpose

- Application forms
- Application fee

Some degree programs will also require:

- GRE Subject Test: Chemistry
- GRE Subject Test: Physics
- Interview or campus visit
- Relevant work experience

PSYCHOLOGY

Psychology is a science that attempts to better understand mental processes and predict human behavior through careful observation, study, and research. It is a popular field with many areas of focus, from industrial and organizational (that applies the principles of psychology in the workplace) to clinical or counseling psychology, where one can focus on children, families, or senior citizens, to name a few.

In general, those interested in psychology follow either a research/teaching track or a counseling track. Psychologists work in schools, hospitals and assisted living centers, and teach or conduct research in schools, colleges, and universities.

About 45 percent of all psychologists are self-employed. In a field that has limited job prospects for those with a bachelor's degree, competition for admission to graduate programs is high. Those with a doctoral degree will find the best job prospects in the field, particularly with a focus in a sub-field such as health. For those seeking a master's degree, job prospects are best in industrial-organizational psychology.

Be sure to consider all the possible paths to reach your goals, such as Doctor of Medicine in Psychiatry, a Master's in Social Work for counseling, or pursuing an advanced degree in education with certification in counseling.

Degrees Offered in Psychology

Students in clinical psychology who wish for a practitioner-based degree with less focus on research can pursue the PsyD (Doctor of Psychology), while students with more research-focused or teaching interests can pursue a PhD in many of the fields of psychology. Both degrees take around five years to complete and are highly competitive. Some students choose to pursue their clinical psychology interests by earning a Master's in Social Work (MSW). Social workers are licensed after completing their MSW program from a Council on Social Work Education (CSWE) accredited program (usually about two years long) and passing their state's Association of Social Work Boards exam. Students should think carefully about their interests and career goals before selecting a program.

Students can also earn a terminal MS degree in their respective field of psychology (clinical, school, etc.), usually within two to three years; however as with most professions, the higher you go, the more careers open up to you. Graduate work in counseling psychology usually culminates in either a PhD or an EdD, both of which take around five years to complete. The PhD is more research-intensive than the EdD, and both are slightly less academically rigorous than the PhD or PsyD in clinical psychology.

For school psychology, the minimum required degree tends to be a master's from a state-approved, two-year school psychology program with at least one year of internship experience. Many states require a more research-heavy Educational Specialist (EdS) degree, and a good number of school psychologists also hold doctorate degrees.

Quick Snapshot: Psychology

SAMPLE DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	% OF EMPLOYMENT	SPECIAL APPLICATION NOTES
Clinical Psychology	Master's: 162 Doctorate: 161	91%	Coursework in natural or social sciences; GRE Subject Test: Psychology
Counseling Psychology	Master's: 252 Doctorate: 76	See Clinical	Coursework in natural or social sciences a bonus.
Developmental and Child Psychology	Master's: 20 Doctorate: 15	8%	Coursework in psychology often required
Educational Psychology	Master's: 91 Doctorate: 68	See Developmental	College coursework in statistics, education & developmental psychology
Experimental Psychology	Master's: 29 Doctorate: 23	See Developmental	
Industrial and Organizational Psychology	Master's: 61 Doctorate: 30	1%	Psychology major or coursework required
School Psychology	Master's: 150 Doctorate: 66	See Clinical	Psychology and education background a bonus, but not required
Social Psychology	Master's: 10 Doctorate: 15	See Developmental	

You can find more detailed information to guide you on the right path from these trade organization websites.

TRADE ORGANIZATIONS YOU SHOULD KNOW	
American Psychological Association apa.org	The American Psychological Association offers information on all areas within the field.
Association for Psychological Science psychologicalscience.org	The Association for Psychological Science publishes news, research, and journals and promotes scientific research within the field of psychology.
American Counseling Association	The American Counseling Association offers information on all areas within

<u>counseling.org</u>	the field, including information on state certification.
National Association of School Psychologists (NASP) <u>nasponline.org</u>	Official website of the NASP, dedicated to sharing resources, studies, and strategies in order to help the public and policymakers recognize the effects of students' mental health on their development, as well as the importance of school psychological services.
Association of State and Provincial Psychology Boards <u>asppb.net</u>	Contains information about state licensing requirements.

General graduate school requirements:

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)
- TOEFL score (if necessary)
- Academic letters of recommendation
- Letter of intent or statement of purpose
- Application forms
- Application fee

Some degree programs will also require:

- GRE Subject Test: Psychology
- Interview

PUBLIC AFFAIRS AND POLICY

Public affairs is an umbrella that unites public policy and public administration, drawing upon the fields of political science and economics, to promote and advance policies and solutions that seek to address the public good. For those who like to keep their opinions to themselves, note that public administration is considered a nonpartisan environment focused on method and historical context. Public policy discussions, on the other hand, are inherently partisan, as those involved seek to advance their agenda and view of the world as the “rule of the day.”

Job outlook is good, but the number of advanced degrees is growing faster than projected job growth. Historically, advanced degrees led to government jobs, but many graduates now work in think tanks, as lobbyists, in academia, for unions or labor relations groups, and in other nonprofit and community organizations. Given the economic crises faced by many state and local governments (which employ about 8.3 million people), be sure to keep options open when seeking employment, especially considering the growing popularity of the field. The number of advanced degrees conferred has grown by 31 percent in just five years (2008–09 to 2013–14).

Quick Snapshot: Public Affairs & Policy

SAMPLE DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	DEGREE OPTIONS	SPECIAL APPLICATION NOTES
Public Administration	Master's: 368 Doctorate: 49	MPA PhD (rare)	Previous work experience sometimes required.
Public Policy/ Analysis	Master's: 80 Doctorate: 40	MPA PhD (rare)	Coursework in economics, statistics, or college-level math helpful.

TRADE ORGANIZATIONS YOU SHOULD KNOW

American Society for Public Administration <u>aspanet.org</u>	The American Society for Public Administration has a wealth of information on everything from the latest policy-making decisions and resource centers to job listings.
Association for Public Policy Analysis and Management <u>appam.org</u>	The Association for Public Policy Analysis and Management has information on conferences, internships, educational programs, jobs, joint degrees, and awards.
National Academy of Public Administration <u>napawash.org</u>	The National Academy for Public Administration is committed to monitoring and improving governance systems of all kinds.
Network of Schools of Public Policy, Affairs, and Administration <u>naspaa.org</u>	Accredits schools of public affairs, including those with dual accreditation. For example, business schools like Willamette University are accredited by both AACSB and NASPAA.

Typical Admissions Requirements

There are no major requirements necessary to apply for advanced degrees in public policy or administration. Many students have at least one year of work experience prior to starting their program. For public policy, helpful background coursework includes economics, statistics, or college-level math.

General graduate school requirements:

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)
- TOEFL score (if necessary)
- Letters of recommendation
- Letter of intent or statement of purpose
- Application forms
- Application fee

Some degree programs will also require:

- Work experience

SOCIAL SCIENCES

Social sciences encompass the academic study of fields that fall outside the natural sciences and focus on society, including the study of groups, organizations, institutions, social and economic systems, cultures, and governments. These disciplines adopt the scientific method, with both quantitative and qualitative analysis geared to social understanding and improvement.

As globalization creates more complex economies, immigration and social media bring more cultures together, and political systems shift to reflect changes in society, the importance of the social sciences is perhaps greater than ever before.

While the employment outlook for social sciences is competitive in places like history and economics, many social sciences are experiencing much faster than average growth. This is somewhat reflected in the number of candidates receiving an advanced degree, which has grown by 12 percent (2008–09 to 2013–14).

Quick Snapshot: Social Sciences

SAMPLE DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	DEGREE OPTIONS	SPECIAL APPLICATION NOTES
Anthropology	Master's: 161 Doctorate: 99	MA PhD	Proficiency in at least one foreign language
Economics	Master's: 189 Doctorate: 116	MA, MS PhD	Elementary economics & statistics background
Geography	Master's: 132 Doctorate: 62	MA, MS PhD	Some programs require minimum GPA or GRE
International Relations & Affairs	Master's: 82 Doctorate: 14	MA, MIA, Joint Degrees (Law, Journalism)	Proficiency in foreign language
Political Science and Government	Master's: 223 Doctorate: 122	MA PhD	Political science or government background preferred, but not required
Sociology	Master's: 228 Doctorate: 115	MSoc, MS PhD	Social science majors or some background in sociology or statistics
Social Sciences, General	Master's: 81 Doctorate: 16	MSSc PhD	Varies

TRADE ORGANIZATIONS YOU SHOULD KNOW

American Anthropological Association aaanet.org	The American Anthropological Association has offered anthropology professionals support, information, and services since 1902.
American Planning Association planning.org	The American Planning Association has advice on planning in urban and rural areas as well as fellowship and conference information.

American Political Science Association apsanet.org	More than 15,000 members in more than 80 countries share knowledge, professional advice and advancement, and a supportive environment conducive to the professional study of politics.
American Sociological Association asanet.org	Information for sociologists, students, and the general public including job opportunities, research grants, and newly published reports from members.
International Economic Development Council iedconline.org	Offers information and services for those interested in economic development.
International Studies Association isanet.org	The International Studies Association promotes international affairs research and education.

Typical Admissions Requirements

While many advanced degree programs do not require specific majors or coursework, many programs recommend background in the area. In addition, programs like anthropology, international economics, and international relations require foreign language proficiency. For fields involving math and research, some coursework in statistics will be helpful background to your advanced studies as well. When making your application to-do list or calendar, be sure to note any special application requirements in advance, especially things like work experience or foreign language

requirements, though some programs may allow you to study a language while working toward your degree.

General graduate school requirements:

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)
- TOEFL score (if necessary)
- Academic letters of recommendation
- Letter of intent or statement of purpose
- Application forms
- Application fee

Some degree programs will also require:

- Interview
- Relevant work experience
- Supplemental essays or writing sample
- Proficiency in a foreign language

SOCIAL WORK

Social workers collaborate with other human services professionals to look for solutions to the complex problems of modern society. While some social workers opt for counseling or clinical practices,

others work in public policy and administration, research, or teaching. Because social workers face society's most challenging problems, working in this vital field takes a lot of effort, a lot of patience, and most of all, lots of passion.

Master's degree programs in social work vary widely in scope and specialty. Some programs focus on methodology and public policy, while others are more clinically focused, preparing professionals for a direct practice in psychotherapy. Still others provide students with the background they need for a career in public and nonprofit social service agencies, or for social planning and social change. When you are choosing a program, it is important to consider where you can get training that is in line with your larger career goals. Upon entering some programs, students are required to choose a specialty, such as mental health, employee assistance, aging, health care, corrections, and child welfare.

The job outlook for social workers is good, growing faster than the national average, particularly for those interested in aging populations, rural settings, or working with substance abuse programs. The number of advanced degrees conferred has grown 31 percent in just a few short years between 2008–09 and 2013–14. According to the Council on Social Work Education, women dominate this field, making up about 86 percent of master's degree enrollment, while historically underrepresented groups comprise about 37 percent of full-time enrollment and 40 percent of part-time enrollment.

Quick Snapshot: Social Work

DEGREE PROGRAM	NO. OF SCHOOLS OFFERING PROGRAM	DEGREE OPTIONS	APPLICATION CONSIDERATIONS
Clinical Social Work	Master's: 8 Doctorate: 2	CSW PhD	A BSW is not required, but social studies related field is preferred; minimum GPA or GRE score; field work (volunteer or paid)
Social Work/Social Work, Other	Master's: 229 Doctorate: 70	MSW, DSW PhD	BSW applicants may be able to enroll with advanced standing status
Substance Abuse/Addiction Counseling	Master's: 19 Doctorate: 0	MA or MS in Substance Abuse MSW, focus in Substance Abuse	Coursework in psychology or social work helpful; experience in clinical setting (volunteer or paid)

TRADE ORGANIZATIONS YOU SHOULD KNOW

American Board of Examiners in Clinical Social Work abecsw.org	Features job postings, newsletters, and resources for students of social work.
American Counseling Association counseling.org	The American Counseling Association offers information on all areas within the field, including information on state certification.
Association of Social Work Boards aswb.org	A professional association that regulates social work and develops and maintains the licensing exam.
National Association of Social Workers socialworkers.org	The largest member organization of professional social workers, offering networking, advocacy, books, and journals.

Typical Admissions Requirements

While a BSW is not required for admission to social work programs, some programs allow enrollees with a BSW to receive advanced standing, thereby shortening the amount of fieldwork and coursework they are required to complete.

Many students entering graduate programs in social work have majored in social work, psychology, or public policy. Otherwise, coursework in social and biological sciences will be useful. Some basic knowledge of statistics and research methodologies will also be beneficial to graduate students in social work.

General graduate school requirements:

- Bachelor's degree from an accredited college or university
- Official transcript(s) from all colleges or universities attended
- GRE General Test scores (different programs require different minimum scores)*
- TOEFL score (if necessary)
- Letters of recommendation
- Letter of intent or statement of purpose
- Application forms
- Application fee

*Some social work programs accept the Miller Analogy Test in lieu of GRE Scores.

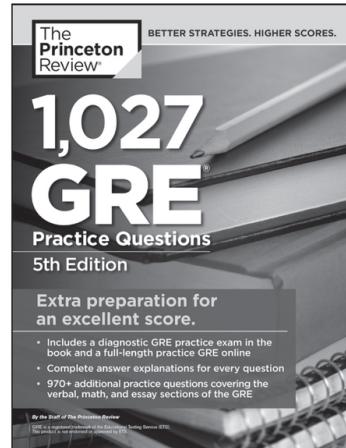
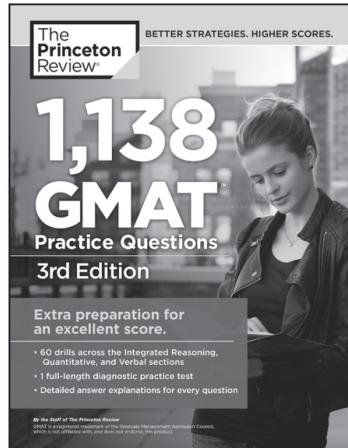
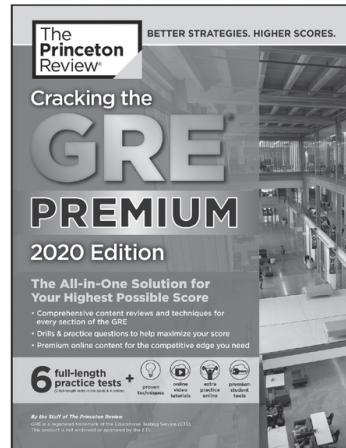
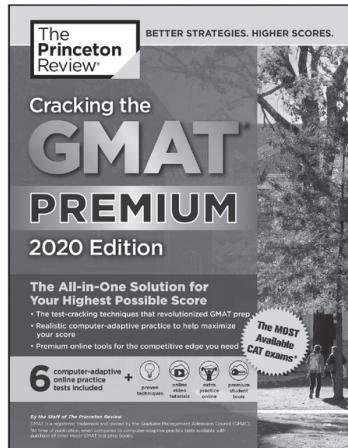
Some degree programs will also require:

- Interview
- Work experience (paid or volunteer)



IF IT'S ON THE TEST, IT'S IN OUR BOOKS!

The Princeton Review has the help you need to
ace the GRE or GMAT.



Find Princeton Review study guides wherever books are sold!

1375 The Princeton Review is not affiliated with Princeton University. Test names are the registered trademarks of their respective owners, who are not affiliated with The Princeton Review.



Penguin
Random
House

What's next on your reading list?

[Discover your next
great read!](#)

Get personalized book picks and up-to-date news about this author.

[Sign up now.](#)