Teachers—Postsecondary

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Significant Points

- Educational qualifications range from expertise in a particular field to a Ph.D., depending on the subject taught and the type of educational institution.
- Job opportunities are expected to be very good, but many new openings will be for part-time or non-tenure-track positions.
- Prospects will be better and earnings higher in rapidly growing fields that offer many nonacademic career options.

Nature of the Work

Postsecondary teachers instruct students in a wide variety of academic and vocational subjects beyond the high school level. Most of theses students are working toward a degree, but many others are studying for a certificate or certification to improve their knowledge or career skills. Postsecondary teachers include college and university faculty, postsecondary career and technical education teachers, and graduate teaching assistants. Teaching in any venue involves forming a lesson plan, presenting material to students, responding to students learning needs, and evaluating student progress. In addition to instruction, postsecondary teachers, particularly those at 4-year colleges and universities, also perform a significant amount of research in the subject they teach. They must also keep up with new developments in their field and may consult with government, business, nonprofit, and community organizations.

College and university faculty make up the majority of postsecondary teachers. Faculty usually are organized into departments or divisions, based on academic subject or field. They typically teach several different related courses in their subject—algebra, calculus, and statistics, for example. They may instruct undergraduate or graduate students, or both. College and university faculty may give lectures to several hundred students in large halls, lead small seminars, or supervise students in laboratories. They prepare lectures, exercises, and laboratory experiments; grade exams and papers; and advise and work with students individually. In universities, they also supervise graduate students' teaching and research. College faculty work with an increasingly varied student population made up of growing shares of part-time, older, and culturally and racially diverse students.

Faculty keep up with developments in their field by reading current literature, talking with colleagues, and participating in professional conferences. They also are encouraged to do their own research to expand knowledge in their field by performing experiments; collecting and analyzing data; or examining original documents, literature, and other source material. They publish their findings in scholarly journals, books, and electronic media.

Most postsecondary teachers extensively use computer technology, including the Internet, e-mail, and software programs. They may use computers in the classroom as teaching aids and may post course content, class notes, class schedules, and other information on the Internet. The use of e-mail, chat rooms, and other techniques has greatly improved communications between students and teachers and among students.

Some instructors use the Internet to teach courses to students at remote sites. These so-called "distance learning" courses are an increasingly popular option for students who work while attending school. Faculty who teach these courses must be able to adapt existing courses to make them successful online or design a new course that takes advantage of the format.

Most full-time faculty members serve on academic or administrative committees that deal with the policies of their institution, departmental matters, academic issues, curricula, budgets, equipment purchases, and hiring. Some work with student and community organizations. Department chairpersons are faculty members who usually teach some courses but have heavier administrative responsibilities.

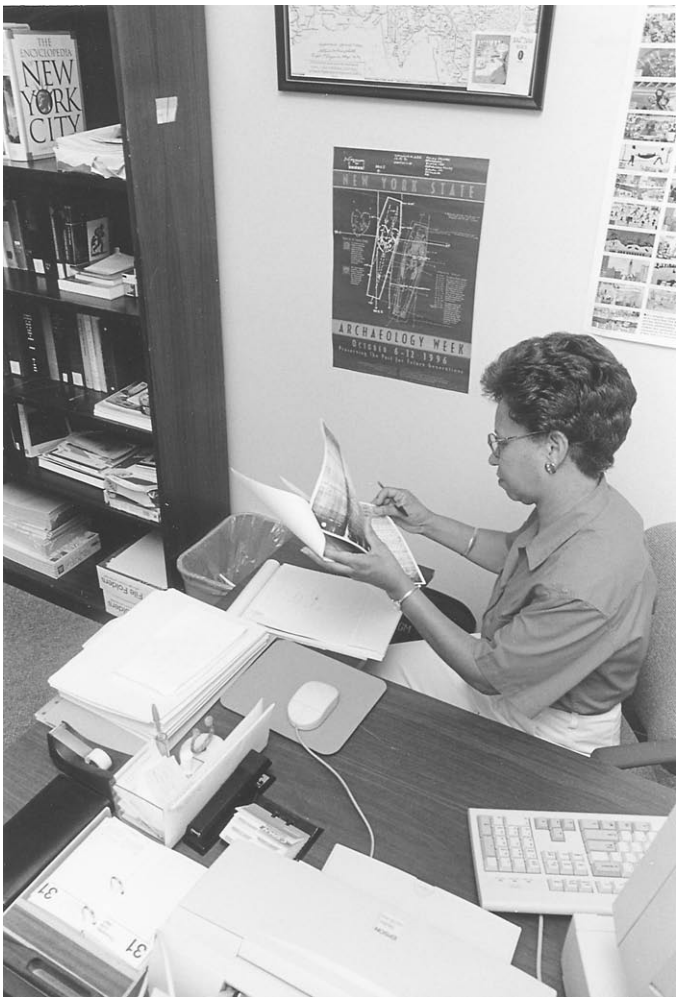
The proportion of time spent on research, teaching, administrative, and other duties varies by individual circumstance and type of institution. Faculty members at universities normally spend a significant part of their time doing research; those in 4-year colleges, somewhat less; and those in 2-year colleges, relatively little. The teaching load, however, often is heavier in 2-year colleges and somewhat lighter at 4-year institutions. At all types of institutions, full professors—those that have reached the highest level in their field—usually spend a larger portion of their time conducting research than do assistant professors, instructors, and lecturers.

In addition to traditional 2- and 4-year institutions, an increasing number of postsecondary educators work in alternative schools or in programs aimed at providing career-related education for working adults. Courses are usually offered online or on nights and weekends. Instructors at these programs generally work part time and are only responsible for teaching, with little to no administrative and research responsibilities.

Postsecondary vocational education teachers, also known as *postsecondary career and technical education teachers*, provide instruction for occupations that require specialized training but not usually a 4-year degree. They may teach classes in welding, dental hygienics, x-ray technician techniques, auto mechanics, or cosmetology, for example. Classes often are taught in an industrial or laboratory setting where students are provided hands-on experience. For example, welding instructors show students various welding techniques and essential safety practices, watch them use tools and equipment, and have them repeat procedures until they meet the specific standards required by the trade. Increasingly, career and technical education teachers are integrating academic and vocational curriculums so that students obtain a variety of skills that can be applied on the job. In addition, career and technical education teachers at community colleges and career and technical schools also often play a key role in students' transition from school to work by helping to establish internship programs for students and by facilitating contact between students and prospective employers.

Graduate teaching assistants, often referred to as *graduate TAs*, assist faculty, department chairs, or other professional staff at colleges and universities by performing teaching or teaching-related duties. In addition to their work responsibilities, assistants have their own school commitments, as they are also students who are working towards earning a graduate degree, such as a Ph.D. Some teaching assistants have full responsibility for teaching a course—usually one that is introductory—which can include preparation of lectures and exams, and assigning final grades to students. Others help faculty members, which may include doing a variety of tasks such as grading papers, monitoring exams, holding office hours or help-sessions for students, conducting laboratory sessions, or administering quizzes to the class. Teaching assistants generally meet initially with the faculty member whom they are going to assist to determine exactly what is expected of them, as each faculty member may have his or her own needs. For example, some faculty members prefer assistants to sit in on classes, but others assign them other tasks to do during class time. Graduate teaching assistants may work one-on-one with a faculty member or, for large classes, they may be one of several assistants.

Work environment. Many postsecondary teachers find the environment intellectually stimulating and rewarding because they are surrounded by others who enjoy their subject. The ability to share their expertise with others is also appealing to many.



Postsecondary teachers conduct research and publish articles and papers, in addition to instructing students.

Most postsecondary teachers have flexible schedules. They must be present for classes, usually 12 to 16 hours per week, and for faculty and committee meetings. Most establish regular office hours for student consultations, usually 3 to 6 hours per week. Otherwise, teachers are free to decide when and where they will work, and how much time to devote to course preparation, grading, study, research, graduate student supervision, and other activities.

Classes are typically scheduled during weekdays, although some occur at night or during the weekend. This is particularly true for teachers at 2-year community colleges or institutions with large enrollments of older students who have full-time jobs or family responsibilities. Most colleges and universities require teachers to work 9 months of the year, which allows them time during the summer and school holidays to teach additional courses, do research, travel, or pursue nonacademic interests.

About 30 percent of college and university faculty worked part time in 2006. Some part-timers, known as "adjunct faculty," have primary jobs outside of academia—in government, private industry, or nonprofit research—and teach "on the side." Others may have multiple part-time teaching positions at different institutions. Most graduate teaching assistants work part time while working on their graduate studies. The number of hours that they work may vary, depending on their assignments.

University faculty may experience a conflict between their responsibilities to teach students and the pressure to do research and publish their findings. This may be a particular problem for young faculty seeking advancement in 4-year research universities. Also, recent cutbacks in support workers and the hiring of more part-time faculty have put a greater administrative burden on full-time faculty. Requirements to teach online classes also have added greatly to the workloads of postsecondary teachers. Many find that developing the courses to put online is very time-consuming, especially when learning how to operate the technology and answering large amounts of e-mail.

Graduate TAs usually have flexibility in their work schedules like college and university faculty, but they also must spend a considerable amount of time pursuing their own academic coursework and studies. Work may be stressful, particularly when assistants are given full responsibility for teaching a class. However, these types of positions allow graduate students the opportunity to gain valuable teaching experience, which is especially helpful for those who seek to become college faculty members after completing their degree.

Training, Other Qualifications, and Advancement

The education and training required of postsecondary teachers varies widely, depending on the subject taught and educational institution employing them. Educational requirements for teachers are generally highest at research universities, where a Ph.D. is the most commonly held degree; at career and technical institutes, experience and expertise in a related occupation is the principal qualification.

Education and training. Four-year colleges and universities usually require candidates for full-time, tenure-track positions, to hold a doctoral degree. However, they may hire master's degree holders or doctoral candidates for certain disciplines, such as the arts, or for part-time and temporary jobs.

Doctoral programs take an average of 6 years of full-time study beyond the bachelor's degree; this includes time spent completing a master's degree and a dissertation. Some programs, such as those in the humanities, may take longer to complete; others, such as those in engineering, usually are shorter. Candidates specialize in a subfield of a discipline, for example, organic chemistry, counseling psychology, or European history, and also take courses covering the entire discipline. Programs typically include 20 or more increasingly specialized courses and seminars plus comprehensive examinations on all major areas of the field. Candidates also must complete a dissertation—a written report on original research in the candidate's major field of study. The dissertation sets forth an original hypothesis or proposes a model and tests it. Students in the natural sciences and engineering usually do laboratory work; in the humanities, they study original documents and other published material. The dissertation is done under the guidance of one or more faculty advisors and usually takes 1 or 2 years of full-time work.

In 2-year colleges, master's degree holders fill most full-time teaching positions. However, in certain fields where there may be more applicants than available jobs, institutions can be more selective in their hiring practices. In these fields, master's degree holders may be passed over in favor of candidates holding Ph.Ds. Many 2-year institutions increasingly prefer job applicants to have some teaching experience or experience with distance learning. Preference also may be given to those holding dual master's degrees, especially at smaller institutions, because they can teach more subjects.

Training requirements for postsecondary career and technical education teachers vary by State and subject. In general, career and technical education teachers need a bachelor's or graduate degree, plus at least 3 years of work experience in their field. In some fields, a license or certificate that demonstrates one's qualifications may be all that is required. These teachers may need to update their skills through continuing education to maintain certification. They must also maintain ongoing dialogue with businesses to determine the skills most needed in the current workplace.

Other qualifications. Postsecondary teachers should communicate and relate well with students, enjoy working with them, and be able to motivate them. They should have inquiring and analytical minds, and a strong desire to pursue and disseminate knowledge. Additionally, they must be self-motivated and able to work in an environment in which they receive little direct supervision.

Obtaining a position as a graduate teaching assistant is a good way to gain college teaching experience. To qualify, candidates must be enrolled in a graduate school program. In addition, some colleges and universities require teaching assistants to attend classes or take some training prior to being given responsibility for a course.

Although graduate teaching assistants usually work at the institution and in the department where they are earning their degree, teaching or internship positions for graduate students at institutions that do not grant a graduate degree have become more common in recent years. For example, a program called Preparing Future Faculty, administered by the Association of American Colleges and Universities and the Council of Graduate Schools, has led to the creation of many programs that are now independent. These programs offer graduate students at research universities the opportunity to work as teaching assistants at other types of institutions, such as liberal arts or community colleges. Working with a mentor, the graduate students teach classes and learn how to improve their teaching techniques. They may attend faculty and committee meetings, develop a curriculum, and learn how to balance the teaching, research, and administrative roles that faculty play. These programs provide valuable learning opportunities for graduate students interested in teaching at the postsecondary level, and also help to make these students aware of the differences among the various types of institutions at which they may someday work.

Some degree holders, particularly those who studied in the natural sciences, spend additional years after earning their graduate degree on postdoctoral research and study before taking a faculty position. Some Ph.D.s are able to extend postdoctoral appointments, or take new ones, if they are unable to find a faculty job. Most of these appointments offer a nominal salary.

Advancement. For faculty, a major goal in the traditional academic career is attaining tenure. The process of attaining tenure can take approximately 7 years with faculty moving up the ranks in tenure-track positions as they meet specific criteria. The ranks are instructor, assistant professor, associate professor, and professor. Colleges and universities usually hire new tenure-track faculty as instructors or assistant professors under term contracts. At the end of the period, their record of teaching, research, and overall contribution to the institution is reviewed and tenure may be granted if the review is favorable. Those denied tenure usually must leave the institution. Tenured professors cannot be fired without just cause and due process. Tenure protects the faculty's academic freedom—the ability to teach and conduct research without fear of being fired for advocating controversial or unpopular ideas. It also gives both faculty and institutions the stability needed for effective research and teaching, and provides financial security for faculty. Some institutions have adopted post-tenure review policies to encourage ongoing evaluation of tenured faculty.

The number of tenure-track positions is declining as institutions seek flexibility in dealing with financial matters and changing student interests. Institutions rely more heavily on limited term contracts and part-time, or adjunct, faculty, thus shrinking the total pool of tenured faculty. Limited-term contracts—typically 2- to 5 years, may be terminated or extended when they expire but generally do not lead to the granting of tenure. In addition, some institutions have limited the percentage of faculty who can be tenured.

For tenured postsecondary teachers, further advancement involves a move into administrative and managerial positions, such as departmental chairperson, dean, and president. At 4-year institutions, such advancement requires a doctoral de-

gree. At 2-year colleges, a doctorate is helpful but not usually required, except for advancement to some top administrative positions. (Deans and departmental chairpersons are covered in the *Handbook* statement on education administrators, while college presidents are included in the *Handbook* statement on top executives.)

Employment

Postsecondary teachers held nearly 1.7 million jobs in 2006. Most were employed in 4-year colleges and universities and in 2-year community colleges. Other postsecondary teachers are employed by schools and institutes that specialize in training people in a specific field, such as technology centers or culinary schools, or work for businesses that provide professional development courses to employees of companies. Some career and technical education teachers work for State and local governments and job training facilities. The following tabulation shows postsecondary teaching jobs in specialties having 20,000 or more jobs in 2006:

Health specialties teachers	145,000
Graduate teaching assistants	144,000
Vocational education teachers	119,000
Art, drama, and music teachers	88,000
Business teachers	82,000
English language and literature teachers	72,000
Education teachers	67,000
Biological science teachers	65,000
Mathematical science teachers	54,000
Nursing instructors and teachers	46,000
Computer science teachers	44,000
Engineering teachers	40,000
Psychology teachers	37,000
Foreign language and literature teachers	30,000
Communications teachers	29,000
History teachers	26,000
Philosophy and religion teachers	25,000
Chemistry teachers	24,000
Recreation and fitness studies teachers	20,000

Job Outlook

Employment of postsecondary teachers is expected to grow much faster than average as student enrollments continue to increase. However, a significant proportion of these new jobs will be part-time and non-tenure-track positions. Retirements of current postsecondary teachers should create numerous openings for all types of postsecondary teachers, so job opportunities are generally expected to be very good, although they will vary by the subject taught and the type of educational institution.

Employment change. Postsecondary teachers are expected to grow by 23 percent between 2006 and 2016, much faster than the average for all occupations. Because of the size of this occupation and its much faster than average growth rate, postsecondary teachers will account for 382,000 new jobs, which is among the largest number of new jobs for an occupation. Projected growth in the occupation will be primarily due to increases in college and university enrollment over the next decade. This enrollment growth stems mainly from the expected increase in the population of 18- to 24-year-olds, who constitute the majority of students at postsecondary institutions, and from the increasing number of high school graduates who choose to attend these institutions. Adults returning to college to enhance their career prospects or to update their skills also will continue to create new opportunities for postsecondary teachers, particularly at community colleges and for-profit institutions that cater to working adults. However, many postsecondary educational institutions receive a significant portion of their funding from State and local governments, so expansion of public higher education will be limited by State and local budgets.

Job prospects. A significant number of openings in this occupation will be created by growth in enrollments and the need to replace the large numbers of postsecondary teachers who are likely to retire over the next decade. Many postsecondary teachers were hired in the late 1960s and the 1970s to teach members of the baby boom generation, and they are expected to retire in growing numbers in the years ahead. As a result, Ph.D. recipients seeking jobs as postsecondary teachers will experience favorable job prospects over the next decade.

Although competition will remain tight for tenure-track positions at 4-year colleges and universities, there will be available a considerable number of part-time or renewable, term appointments at these institutions and at community colleges. Opportunities for master's degree holders are also expected to be favorable because there will be considerable growth at community colleges, career education programs, and other institutions that employ them.

Opportunities for graduate teaching assistants are expected to be very good, reflecting expectations of higher undergraduate enrollments coupled with more modest increases in graduate student enrollment. Constituting almost 9 percent of all postsecondary teachers, graduate teaching assistants play an integral role in the postsecondary education system, and they are expected to continue to do so in the future.

Opportunities will also be excellent for postsecondary vocational teachers due to an increased emphasis on career and technical education at the postsecondary level. Job growth, combined with a large number of expected retirements, will result in many job openings for these workers. Prospects will be best for instructors in specialties that pay well outside of the

Projections data from the National Employment Matrix

Occupational Title	SOC Code	Employment, 2006	Projected employment, 2016	Change, 2006-2016	
				Number	Percent
Postsecondary teachers	25-1000	1,672,000	2,054,000	382,000	23

NOTE: Data in this table are rounded. See the discussion of the employment projections table in the *Handbook* introductory chapter on *Occupational Information Included in the Handbook*.

teaching field, such as the construction trades and manufacturing technology.

One of the main reasons why students attend postsecondary institutions is to prepare themselves for careers, so the best job prospects for postsecondary teachers are likely to be in rapidly growing fields that offer many nonacademic career options. These will include fields such as business, nursing and other health specialties, and biological sciences. Community colleges and other institutions offering career and technical education have been among the most rapidly growing, and these institutions are expected to offer some of the best opportunities for postsecondary teachers.

Earnings

Median annual earnings of all postsecondary teachers in 2006 were $56,120. The middle 50 percent earned between $39,610 and $80,390. The lowest 10 percent earned less than $27,590, and the highest 10 percent earned more than $113,450.

Earnings for college faculty vary according to rank and type of institution, geographic area, and field. According to a 2006-07 survey by the American Association of University Professors, salaries for full-time faculty averaged $73,207. By rank, the average was $98,974 for professors, $69,911 for associate professors, $58,662 for assistant professors, $42,609 for instructors, and $48,289 for lecturers. Faculty in 4-year institutions earn higher salaries, on average, than do those in 2-year schools. In 2006-07, faculty salaries averaged $84,249 in private independent institutions, $71,362 in public institutions, and $66,118 in religiously affiliated private colleges and universities. In fields with high-paying nonacademic alternatives—medicine, law, engineering, and business, among others—earnings exceed these averages. In others fields, such as the humanities and education, earnings are lower. Earnings for postsecondary career and technical education teachers vary widely by subject, academic credentials, experience, and region of the country.

Many faculty members have significant earnings in addition to their base salary from consulting, teaching additional courses, research, writing for publication, or other employment. In addition, many college and university faculty enjoy unique benefits, including access to campus facilities, tuition waivers for dependents, housing and travel allowances, and paid leave for sabbaticals. Part-time faculty and instructors usually have fewer benefits than full-time faculty.

Related Occupations

Postsecondary teaching requires the ability to communicate ideas well, motivate students, and be creative. Workers in other occupations that require these skills are preschool, kindergarten, elementary, middle, and secondary school teachers; education administrators; librarians; counselors; writers and editors; public relations specialists; and management analysts. Faculty research activities often are similar to those of life, physical, and social scientists, as well as to those of managers and administrators in industry, government, and nonprofit research organizations.

Sources of Additional Information

Professional societies related to a field of study often provide information on academic and nonacademic employment opportunities. Names and addresses of many of these societies appear in statements elsewhere in the *Handbook*.

Special publications on higher education, such as The Chronicle of Higher Education, list specific employment opportunities for faculty. These publications are available in libraries.

For information on the Preparing Future Faculty program, contact:

➤ Council of Graduate Schools, One Dupont Circle, NW., Suite 430, Washington, DC 20036-1173.
Internet: **http://www.preparing-faculty.org**

For information on postsecondary career and technical education teaching positions, contact State departments of career and technical education. General information on adult and career and technical education is available from:

➤ Association for Career and Technical Education, 1410 King St., Alexandria, VA 22314. Internet: **http://www.acteonline.org**