



## Structure of the U.S. Education System: Credit Systems

U.S. educators at the secondary, higher, and adult/continuing education levels use a variety of formulae to calculate, record, and interpret the amount of earned academic or training credits that students accumulate *en route* to earning certificates, diplomas, degrees, and other qualifications. In most cases, the earned credits are identified by the term "*credit hours*" or "*credit units*." Several important points need to be understood about credit:

- Credit hours or units represent a mathematical summarization of all work completed, and are not the same as the actual classroom contact or instructional hours.
- U.S. institutions use credit formulae to record all types of academic work, not just taught courses. A U.S. doctoral student's academic record, for example, will contain credits earned for independent research, often expressed as if the student had been enrolled in classes, even though the actual work was independent research.
- Credits are a convenient numerical way to assess tuition and fee charges and determine student status. Even unsupervised doctoral candidates must be registered as students and pay tuition charges.
- Registered student status is usually defined as being enrolled in a given semester or quarter for a specified minimum number of credit hours, which are assigned for any type of study recognized and required by the faculty, and tuition charges are usually calculated by the instructional cost per credit hour.

### SECONDARY LEVEL CREDIT UNITS

The most widely used credit systems in U.S. secondary education are based on the Carnegie Unit system. Carnegie Units were proposed in 1906 as a basis for measuring school work. A unit would represent a single subject taught for one classroom period for five days a week. Fractional units would be awarded for subjects taught less frequently. The term "Carnegie Unit" is still used to describe this system as are other terms such as "annual credit unit." Historical information about the Carnegie Unit can be found in the FAQ section of the Carnegie Foundation for the Advancement of Teaching website under the title [What is a Carnegie Unit?](#).

Some secondary schools assign credits by semester. These semester credit units are based on the formula that a semester credit unit equals a single subject taught for one classroom period for five days a week. Still other schools assign credit by the classroom period, or "hour." Since the standard secondary class load is five subjects, five hourly credits equal one semester credit unit, which is doubled for annual credit units.

### POSTSECONDARY CREDIT SYSTEMS

Semester Calendar Credit Hours. Most U.S. higher education institutions operate on an academic year divided into two equal semesters of 15-16 weeks' duration, with a winter break of 2-3 weeks and a summer session of 10-12 weeks, plus additional shorter

breaks. The actual amount of academic work that goes into a single semester credit hour is often calculated as follows:

- One lecture (taught) or seminar (discussion) credit hour represents 1 hour per week of scheduled class/seminar time and 2 hours of student preparation time. Most lecture and seminar courses are awarded 3 credit hours. Over an entire semester, this formula represents at least 45 hours of class time and 90 hours of student preparation.
- One laboratory credit hour represents 1 hour per week of lecture or discussion time plus 1-2 hours per week of scheduled supervised or independent laboratory work, and 2 hours of student preparation time. Most laboratory courses are awarded up to 4 credit hours. This calculation represents at least 45 hours of class time, between 45 and 90 hours of laboratory time, and 90 hours of student preparation per semester.
- One practice credit hour (supervised clinical rounds, visual or performing art studio, supervised student teaching, field work, etc.) represents 3-4 hours per week of supervised and /or independent practice. This in turn represents between 45 and 60 hours of work per semester. Blocks of 3 practice credit hours, which equate to a studio or practice course, represent between 135 and 180 total hours of academic work per semester.
- One independent study (thesis or dissertation research) hour is calculated similarly to practice credit hours.
- Internship or apprenticeship credit hours are determined by negotiation between the supervising faculty and the work supervisor at the cooperating site, both of whom must judge and certify different aspects of the student's work. The credit formula is similar to that for practice credit.

A typical bachelor's degree program of study on a semester calendar requires at least 120 credit hours to be earned by the student. Normal full-time registration is usually 15 credit hours per semester or 30 per academic year (shortfalls can be made up in summer sessions or independent study). This roughly translates into at least 30-40 courses (depending on the major subject and thus the proportion of types of credit hours earned) and represents at least 5,400 – and probably more – actual hours of dedicated academic work for a non-science or non-art concentration, and well over that total for graduates of programs in the sciences, engineering, fine arts, or performing arts. A master's degree program requiring at least 33 credit hours and including a research thesis or project represents over 4,000 actual hours of supervised and unsupervised (independent research) study, while a doctoral program can represent 8,000 or more actual hours of advanced study and research beyond the master's degree.

**Quarter Calendar Credit Hours.** Some U.S. institutions use a quarter calendar, in which the academic year is divided into three terms, called quarters, of 10-11 weeks' duration plus a summer session (considered the fourth quarter, but optional), a short winter term and other calendar breaks. Quarter credit hours represent proportionately less work than semester hours due to the shorter terms, about two-thirds of a semester credit hour. Thus, a bachelor's degree at an institution on the quarter calendar may require a minimum of 180 quarter hours, which compares to 120 semester hours.

**Other Postsecondary Credit Systems.** The semester and quarter hour systems are only the most commonly used credit systems in the United States. Several institutions employ their own special systems for recording credits, ranging from unit systems similar to the Carnegie system (one course = one credit) to point systems based on various formulae.

**See also:** [U.S. Grading Systems](#)  
[Assessment](#)  
[Standardized Tests](#)

[Experiential Credit Conversion](#)  
[U.S. Credit Systems](#)  
[Comparing U.S. and Other Credit Systems](#)

[Return to Structure of U.S. Education](#)  
[Return to USNEI Home Page](#)