

COMPARING INTERNATIONAL CREDIT SYSTEMS



To be used as a supplemental resource to the Standards and Guidelines for
Global Evangelical Theological Education (SG-GETE)

<https://icete.info/resources/sggete/>

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How can programs or degrees across countries and continents be compared? What degrees can count for access as students move internationally? How can credit systems be translated across international educational standards and practices? Is there something like a common currency? These are questions that particularly important in a global framework like the SGGETE.

General criteria

No international standards. The first thing to notice is that there is no single international standard for the quantitative measurement of educational units (courses, programs, degrees). The transfer of credits from system to another is a matter of calculations and certain ambiguities cannot always be excluded.¹ It is not possible, for example, to define globally applicable “total credit requirements for each degree program (i.e. MA, MDiv, etc)” or even to “identify an acceptable range” of credits. Nomenclature and regulations are different in the various educational systems.

For example, whereas the rule MA = 2 years, MDiv = 3 years, MTh = 4 years works in the American structure, in Europe there are different kinds of Master’s degree studies, which generally must comprise at least 300 ECTS and can mean either 5 years full-time; 3 years (180 ECTS) for the Bachelor level plus 2 years (120) ECTS; or 4 years plus 1. Also, in Europe, there is often no difference in duration between an MA and an MTh. The degree nomenclature is thus very difficult to compare.

Need for careful calculations. Since duration (credit requirements for degrees) and nomenclature differ in the various educational systems, institutions should be required to identify the duration of the programs (total credit hours). Transfer across educational systems should always require careful calculation (degree nomenclature alone is not a solid indicator for the duration of programs).

Time based credits? We also need to be aware of the fact that the concept of ‘time based’ credits has been criticized on educational grounds. The credit system puts the emphasis on duration, however in educational terms, achievement can only be measured by the demonstration of competences. How much time a student needs to acquire certain competences is a secondary issue. What ultimately counts are learning outcomes not hours of learning.

However, in the process of growing international mobility in Higher Education and an increasing number of part-time students, the need for comparability of duration emerged. A currency to at least measure tentatively the total learning time a student invests facilitates the comparison of courses and programs. But it should be kept in mind that this is only an auxiliary structure. Therefore, terms such as “notional hours of learning” or “average hours of learning” are often used. While credit systems are helpful tools to quantify educational processes, it should always be clear that the quality of education can only be measured by the assessment of learning outcomes.

¹ Robert Wagenaar, “Credit and Credit Reference Systems: A World View,” <http://studylib.net/doc/18677855/credit-and-credit-reference-systems--a-world-view>.

Comparing credit systems

In what follows, two major credit systems (US and ECTS) will be introduced and the most common transfer practices will be explained.²

The US-Credit System is based on the so called “Carnegie Unit”, a standard defined in 1906 “as a basis for measuring school work.”³ The standard Carnegie Unit is defined as 120 hours of contact time with an instructor, which translates into one hour of instruction on a particular subject per day, five days a week, for twenty-four weeks annually.

In higher education, students receive “credit hours,” a metric derived from the Carnegie Unit and based on the number of “contact hours” students spend in class per week in a given semester.

A typical three-credit course, for example, meets for three hours per week over a fifteen-week semester. A student, then, might earn fifteen credit hours per semester (fifteen is standard full-time registration for a semester, thirty for an academic year) *en route* to a four-year bachelor’s degree requiring a total of 120 credits.

Because of the presupposition of contact hours, the Carnegie Unit, as traditionally defined, is difficult to accommodate to modes of distance education that do not involve face-to-face instruction, such as online and correspondence studies.

In 2010, the United States Department of Education issued a new definition of academic credit, required of US higher education institutions by law, that calls for a reasonable approximation of the amount of work required by the traditional Carnegie Unit, while not imposing or presupposing a particular model of instruction. Based on this definition the US federal regulations define one credit as follows:⁴

- One hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
- At least an equivalent amount of work as required in paragraph (1) of this definition for other academic activities as established by the institution including laboratory work, internships, practice, studio work, and other academic work leading to the award of credit hours.

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

- (1) 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.
- (2) 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 Structure of the U.S. Education System: Credit Systems”, published by the International Affairs Office, U.S. Department of Education (February 2008). <https://sites.ed.gov/international>.

³ “The Carnegie Unit. A Century-Old Standard in a Changing Education Landscape” by The Carnegie Foundation (2015). <https://www.carnegiefoundation.org/resources/publications/carnegie-unit>.

⁴ The Code of Federal Regulations, 34 CFR 600.2.

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.

- (3) 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.
- (4) One independent study (thesis or dissertation research) hour is calculated similarly to practice credit hours.
- (5) 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.

Government recognized accrediting agencies basically follow this standard and require institutions of higher learning to apply this definition. Regarding the implications of the new legislation for online and emerging instructional models, the Department of Education has clarified that:

- the new credit requires an equivalent amount of work as that required by the Carnegie system, without requiring strict adherence to classic definitions of contact hours;
- the new credit is modality neutral, applying equally to face-to-face, blended, online and distance instructional models, that are oriented around contact hours, workload or any combination thereof;
- the definition of credit is sufficiently broad and encompassing so as not to exclude certain types of delivery;
- US schools can structure their academic programs with whatever administrative credit system they choose, as long as the official definition of credit is used in applications for Federal financial aid;
- the new definition of credit is compatible with competency-based education and with programs that grant academic credit based on the demonstrated prior learning;
- the definition of credit allows for the assignment of credits by Direct Assessment under certain conditions without necessarily being linked to the fulfilment of a certain amount of clock hours (e.g. a student could receive credit for the course "Algebra 1" by passing an equivalency exam that demonstrates the mastery of the subject);
- the definition of credit does not contain any requirement of "seat-time."⁵

In order to compare the US-System with the European ECTS-System, we have to look at the "total learning time" (comprising class work and all other learning activities). Based on the figures given in the statements above, we can conclude that one US three-credit

⁵ U. S. Department of Education, "Subject: Guidance to Institutions and Accrediting Agencies Regarding a Credit Hour as Defined in the Final Regulations Published on October 29, 2010," <https://ifap.ed.gov/dpclatters/attachments/GEN1106.pdf>;

U. S. Department of Education, "Program Integrity Questions and Answers - Credit Hour," <https://www2.ed.gov/policy/highered/reg/hearulemaking/2009/credit.html>.

course in higher education normally comprises 135 hours of total learning time (normally 45 hours lecture and/or seminar plus 90 hours).

The European ECTS (European Credit Transfer System) follows a different philosophy. It does not start the calculation with the class hours (contact hours) but with the total learning time including all teaching/learning activities. The standard defined in the context of the Bologna-Process is 25 to 30 hours of teaching/learning for one ECTS credit.

The official definitions are as follows:⁶ ECTS credits express the volume of learning based on the defined learning outcomes and their associated workload. 60 ECTS credits are allocated to the learning outcomes and associated workload of a full-time academic year or its equivalent, which normally comprises a number of educational components to which credits (on the basis of the learning outcomes and workload) are allocated. ECTS credits are generally expressed in whole numbers.

Workload is an estimation of the time the individual typically needs to complete all learning activities such as lectures, seminars, projects, practical work, work placements and individual study required to achieve the defined learning outcomes in formal learning environments. The correspondence of the full-time workload of an academic year to 60 credits is often formalized by national legal provisions. In most cases, workload ranges from 1,500 to 1,800 hours for an academic year, which means that one credit corresponds to 25 to 30 hours of work. It should be recognised that this represents the typical workload and that for individual students the actual time to achieve the learning outcomes will vary.

For our calculations this means:

- 1 ECTS comprises 25 to 30 hours of teaching/learning.
- One full-time academic year comprises 60 ECTS, equals 1,500 to 1,800 hours of teaching/learning.

The European countries have defined in their National Qualifications Frameworks (NQF) how many hours per credit need to be calculated in their country.⁷

Calculations: Some examples

Transferring from the US-System to the European System. The table below illustrates how many hours of learning are entailed in 1 US credit and how to many ECTS this equates. The ECTS are expressed in a min-max range in reflection of the different amounts of hours that European countries allocate to 1 ECTS (this ranges between 25 and 30 hours per credit). These figures leave space for calculations between a minimal ratio of 1:1.5 and a maximum of 1:1.8.

⁶ ECTS Users' Guide. Luxembourg: Publications Office of the European Union (2015), p. 10 (https://ec.europa.eu/education/ects/users-guide/docs/ects-users-guide_en.pdf).

⁷ For the applications of this definition in different European countries see ECTS Users' Guide 2009, Annex 5: Overview of national regulations on the number of learning hours per academic year. http://www.hubologna.hacettepe.edu.tr/ECTS_users_guide.pdf.

According to these calculations, a common 3 credit US course counts between 4.5 and 5.4 ECTS credits.

US credits	US hours	European credits (min-max)
1 credit	45 hours	1.5 - 1.8 ECTS
30 credits (one full time year)	1,350 hours	45 - 54 ECTS

It should be noted that European universities quite often apply a 1:2 ratio (1 US credit = 2 ECTS).⁸ This practice is not based on the calculation of exact hours but on the comparison of entire semesters or academic years. The assumption is: If a European student studies in the US one full semester full-time, he/she will earn 15 US credits. One full-time semester in Europe comprises 30 ECTS. This leads to a 1:2 ratio.

Transferring from the European System to the US-System. The same calculations above can be made in reverse, from ECTS to US Carnegie units.

European ECTS	ECTS hours	US Carnegie credits (min-max)
1 credit	25 - 30 hours	0.55 - 0.66 US credits
60 credits (one full time year)	1,500 - 1,800 hours	33 - 40 US credits

Other Credit Systems

Besides the US and the ECTS system, the UK credit counting is also be widespread. A document published by the UK government, based in the Higher Education Credit Framework for England, the Credit and Qualifications Framework for Wales, and Scottish Credit and Qualifications Framework, states that “one credit is equivalent to 10 notional hours of learning (which includes time spent preparing for taught sessions, independent reading and study, completion of course work as well as time in formal taught sessions); and current practice equates one ECTS credit with two UK credits.”⁹

⁸ See Academic Embassy, an independent German organization, advising international students (www.academic-embassy.de/blog/umrechnung-und-anerkennung-nordamerikanischer-usa-oder-kanada-credit-units-in-ects), and The University of Zurich, “Anerkennung und Anrechnung von extern erbrachten Studienleistungen“ (https://www.khist.uzh.ch/dam/jcr:00000000-3282-b194-0000-00002608b73c/E_Dossier_Anrechnung_100909_AKTUELL.pdf).

⁹ “Credit Transfer in Higher Education. A review of the literature,” <https://www.gov.uk/government/publications/credit-transfer-in-higher-education>.