## STUDENT WORKLOAD, TEACHING METHODS AND LEARNING OUTCOMES: THE *TUNING* APPROACH

**The need**
While many countries in Europe are preparing the implementation of a two cycle system in accordance with the Bologna process, it becomes increasingly clear that there is a need to provide some simple reference points with regard to student workload. The issue of workload is related to the introduction of the ECTS credit system, both as a transfer and an accumulation system. ECTS is one of the tools for promoting comparability and compatibility in European Higher Education. The need for having clear agreed reference points also arises from the demand for transparency and fairness to students[1].

**ECTS principles**
The European Credit Transfer and Accumulation System, abbreviated as ECTS, is a student-centred system based on the student workload required to achieve the objectives of a programme, objectives specified in terms of the learning outcomes and competences to be required. ECTS is based on a number of principles[2]:

- 60 credits measure the workload of a full-time student during one academic year. The student workload of a full-time study programme in Europe amounts in most cases to around 1500-1800 hours per year and in those cases one credit stands for around 25 to 30 working hours.[3]
- Credits in ECTS can only be obtained after successful completion of the work required and appropriate assessment of the learning outcomes achieved. Learning outcomes are sets of competences, expressing what the student will know, understand or be able to do after completion of a process of learning, long or short.
- Student workload in ECTS consists of the time required to complete all planned learning activities such as attending lectures, seminars, independent and private study, placements, preparation of projects, examinations, and so forth.
- Credits are allocated to all educational components of a study programme (such as modules, courses, placements, dissertation work, etc.) and reflect the quantity of work each component requires to achieve its specific objectives or learning outcomes in relation to the total quantity of work necessary to complete a full year of study successfully.

The project *Tuning Educational Structures in Europe,* which focuses on learning outcomes and general academic (generic) competences and subject related competences, has shown us that approaches to teaching, learning and assessment have an impact on the workload required to achieve the desired learning outcomes and, consequently, on credit allocation.[4] Workload, teaching methods and learning

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[1] The term student is used in this paper for any type of learner.
[2] A detailed description of the ECTS features can be found in the ECTS Users' Guide, which is available on the Europa Internet server of the European Commission:
http://europa.eu.int/comm/education/programmes/socrates/ects/index_en.html .
[3] In second cycle full time programmes of studies we can distinguish two types: normal course programme which have an official load of 60 credits and so-called *intensive programmes* of a full calendar year (e.g. 12 months programmes, in stead of a 9 to 10 months programmes) can have a maximum load of 75 credits (which equals 46 to 50 weeks).
[4] The definition of learning outcomes agreed upon in the Tuning project is the following: S*tatements of what a learner is expected to know, understand and/or be able to demonstrate after completion of learning. They can refer to a single course unit or module or else to a period*

outcomes are clearly related to each other. However, there are other relevant elements. In achieving the desired learning outcomes a large number of interrelated factors play a role. The diversity of traditions has to be taken into account, as well as curriculum design and context,, coherence of the curriculum, teaching organisation, ability and diligence of the student. In other words, the time required to achieve the same learning outcomes may vary according to the context[5]


**An approach for determining student workload in Higher Education programmes**
When deciding on the student workload the following elements are of relevance:
- The student has a fixed amount of time depending on the programme he/she is taking.
- The overall responsibility for the design of a programme of studies and the number of credits allocated to courses lies with the responsible legal body, e.g. faculty executive board, etc.
- The final responsibility for deciding on the teaching, learning and assessment activities for a particular amount of student time is delegated by faculty and university authorities to the teacher or the responsible team of staff.
- It is crucial that the teacher be aware of the specific learning outcomes to be achieved and the competences to be obtained.
- The teacher should reflect on which educational activities are more relevant to reach the learning outcomes of the module / course unit.
- The teacher should have a notion of the average student work time required for each of the activities selected for the module / course unit.
- The student has a crucial role in the monitoring process to determine whether the estimated student workload is realistic, although monitoring is also a responsibility of the teaching staff.
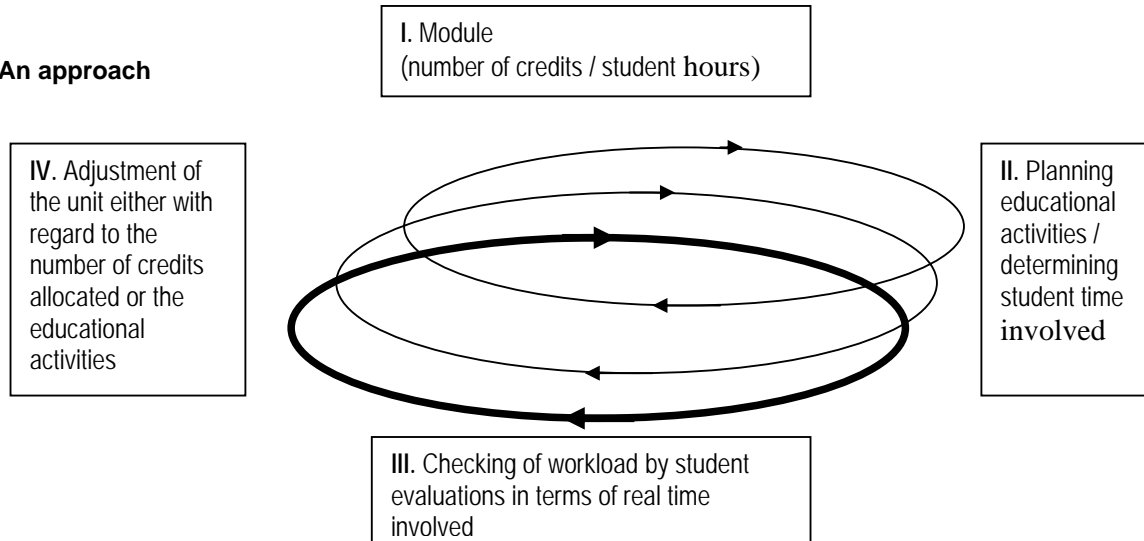
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*of studies, for example, a first or a second cycle programme. Learning outcomes specify the minimum requirements for award of credit.* Learning outcomes are formulated by academic staff.

The Tuning Project focuses on subject specific competences and generic competences. These competences represent a dynamic combination of knowledge, understanding, skills, abilities and values. Fostering these competences are the object of educational programmes. Competences, which are obtained by the student, will be formed in various course units and assessed at different stages.

Learning outcomes according to Tuning methodology should be formulated in terms of competences. Competences may be developed to a greater degree than the level required by the learning outcome.

[5] 'Educational Structures, Learning Outcomes, Workload and the Calculation of ECTS Credits', in Julia Gonzalez and Robert Wagenaar, eds., *Tuning Educational Structures in Europe. Final report - Phase One* (Bilbao and Groningen 2003).

**An approach**

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I. Module
(number of credits / student hours)
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IV. Adjustment of
the unit either with
regard to the
number of credits
allocated or the
educational
activities
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II. Planning
educational
activities /
determining
student time
involved
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III. Checking of workload by student
evaluations in terms of real time
involved
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**Four steps**
To realize the overall objective, namely the development of an approach which leads to a truly valid consideration of a student's workload, implementation of the following four steps is recommended.

*I. Introducing modules/course units*
A choice must be made between the use of a modularized or a non-modularized system. In a non-modularized system each course unit can have a different number of credits although the total credits for each academic year will still be 60. In a modularized system the course units/modules have a fixed number of credits, 5 credits for example, or a multiple of this number. The use of a modularized system in an institution facilitates the use of the same modules by students enrolled in different programmes.

*II. Estimating student workload*
The workload of a module/course unit is based on the total amount of learning activities a student is expected to complete in order to achieve the foreseen learning outcomes. It is measured in time (in work hours); for example, a module of 5 credits allows for around 125-150 hours of work of a typical student.

Educational activities can be defined by considering the following aspects:
- *Modes of instruction (types of teaching and learning activities):* lecture, seminar, research seminar, exercise course, practical, laboratory work, guided personal study, tutorial, independent studies, internship, placement or 'stage', fieldwork, project work, etc.
- *types of learning activities:* attending lectures, performing specific assignments, practising technical or laboratory skills, writing papers, independent and private study, reading books and papers, learning how to give constructive criticism of the work of others, chairing meetings, etc.
- *types of assessment:* oral examination, written examination, oral presentation, test,, paper/essay, portfolio, report about an internship, report on fieldwork, continuous assessment, (final) thesis/dissertation, etc.

Teachers estimate the time required to complete the activities foreseen for each course unit / module. The workload expressed in time should match the number of credits

available for the course unit. Teachers must develop suitable strategies to use the time available to best advantage.

*III. Checking the estimated workload through student evaluations*
There are different methods to check whether the estimated student workload is correct. The most common method is the use of questionnaires to be completed by students, either during the learning process or after the completion of the course.

*IV. Adjustment of workload and/or educational activities*
The outcome of the monitoring process or an updating of the course content might lead to an adjustment of the workload and/or the type of educational activities of the course unit/module. In a modularized model it will be necessary to adjust the amount of learning material and/or the types of teaching, learning and assessment activities, because the number of credits (e.g., in our example, 5 or a multiple of 5) is fixed. In a non-modular model also the number of credits can be changed, but this will, of course, have an effect on other units, because the total number of credits of the programme of study is fixed (e.g. 30 per semester, 60 per year etc.). An adjustment of workload and/or activities is required anyway when the monitoring process reveals that the estimated student workload does not correspond to the actual workload.


**Explanatory note regarding the use of the Tuning model in practice**
The Tuning approach is based on the correlation of a number of decisive elements:
- the degree profile which indicates the place of the module in the overall programme of studies, as well as the competences to be developed in the module.
- the target group, the level of the module and any existing entrance requirements
- the learning outcomes formulated for the module
- the educational activities which best suit the learning outcomes to be achieved
- the types of assessment that are considered most appropriate to the learning outcomes
- the average work time (in hours), based on student workload, required to perform the educational activities which are necessary to achieve the learning outcomes.

Tuning offers two forms that can be helpful in making decisions on and adjustment of the student workload. The first form is for the teacher to plan the educational module and estimate the student working hours involved. The second is for the student to indicate the actual amount of time spent on the module, thus providing an opportunity to check whether the estimated workload corresponds to reality. Students are given the form completed by the teacher where only the estimated workload is not shown. By using these forms both teacher and students become aware of the learning outcomes, their relationship to the competences being developed and the average student time involved for each of the tasks.

Samples of the two forms are attached to this paper together with examples of how they could be used in practice for a different number of subject areas.

The first example focuses on generic competences which, in the Tuning consultation process with graduates, employers and academics, were ranked lower in the learning process. Furthermore, a combination of educational activities has been chosen, which covers different approaches to teaching, learning and assessment. This is only to illustrate how these approaches can be used. **A typical course unit might be expected to be much more straightforward and therefore easier to plan.** Finally, it has to be stressed that the example does not intend to give an indication about the number of lectures per credit, the most appropriate educational activities, or possible titles for lectures, etc. The hypothetical example is **only intended to serve as a tool**

for discussion and a practical way to show how competences, learning outcomes, educational activities, levels, credits and student workload are related.

This hypothetical example is followed by practical examples from different disciplines. All examples are intended to help the teaching staff to make its own calculations and judgements with regard to the number of ECTS credits to allocate to a teaching unit.

*Prepared by Julia González and Robert Wagenaar*

**T**∪**ning**
Tuning
Educational Structures
in Europe

**PLANNING FORM FOR AN EDUCATIONAL MODULE**
*(to be completed by the teacher)*

Programme of Studies: …………………………………………………............
Name of the module / course unit: ……………………………………………………
Type of course (e.g. major, minor, elective): ………………………………………….
Level of the module / course unit (e.g. BA, MA, PhD): ………………………………
Prerequisites: …………………………………………………………... …………..
Number of ECTS credits: …………………………………………………….............

Competences to be developed:
1.    …………………………………………………………………………………
2.    …………………………………………………………………………………
3.    …………………………………………………………………………………
4.    …………………………………………………………………………………
5.    …………………………………………………………………………………
6.    …………………………………………………………………………………

| Learning outcomes | Educational activities | Estimated student work time in hours | Assessment |
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**FORM FOR CHECKING WORKLOAD OF AN EDUCATIONAL MODULE**
*(to be completed by the student)*

Programme of Studies: ………………………………………………………….........
Name of the module / course unit:…………………………………………………….
Type of course (e.g. major, minor, elective):…………………………………………..
Level of the module / course unit (e.g. BA, MA, PhD):…………………………………….
Prerequisites:……………………………………………………………………... …….
Number of ECTS credits:…………………………………………………………….....

Competences to be developed:
1.    ……………………………………………………………………………………
2.    ……………………………………………………………………………………
3.    ……………………………………………………………………………………
4.    ……………………………………………………………………………………
5.    ……………………………………………………………………………………
6.    ……………………………………………………………………………………

| Learning outcomes | Educational activities | Estimated student work time in hours | Assessment |
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*FORM FOR CHECKING WORKLOAD OF AN EDUCATIONAL MODULE*
*(Completed by the teacher)*

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Programme of Studies:                    ----
Name of the module / course unit:    Intercultural Communication in Multicultural
                                                          Societies
Type of course:                              Elective course unit
Level of the module / course unit:    Bachelor
Prerequisites:                                 ----
Number of ECTS credits:                 5 ECTS (average student working time: 125 hours)

Main competences to be developed:
1. Appreciation of diversity and multiculturality (related to modules X, Y, Z)
2. Capacity to work in multicultural contexts (related to modules A, Z, J)
3. Teamwork (related to modules ....)
4. Oral and written communication (related to modules ....)
5. Capacity for  applying knowledge in practice (related to modules ....)
6. Understanding of cultures and customs of other countries
7. Capacity to understand structures of cultural systems     (related to modules ....)
8. Capacity to have an independent judgement on current related issues

| Learning outcomes | Educational activities | Estimated student work time in hours | Assess-ment |
|---|---|---|---|
| Familiarity with diverse approaches to culture and understanding of their implications.<br><br>Understanding and capacity to use in an adequate academic context key concepts such as cultural identity, multiculturalism, integration, assimilation, segregation, context and meaning, etc.<br><br>Development by the student of his or her own mental frameworks in relation to: | Background questionnaire | ½ hour | Class Participation * (40%)<br><br><br><br><br>Oral presenta-tions (all groups)<br><br>(12%) |
| | Lecture 1: *Approaches to culture* | 1 hour | |
| | Group work on definitions of culture | 1 hour | |
| | Class discussion | 1 hour | |
| | Reading assignment | 5 hours | |
| | Class seminar on reading assignment | ½ hour | |
| | Lecture 2: *Perception and Culture* | 1 hour | |
| | Reading assignment on the lecture | 3 hours | |
| | Class seminar on reading assignment | ½ hour | |
| | Lecture 3: *Cultural identities, group, individual and society* | 1 hour | |
| | Reading assignment on the lecture | 5 hours | |
| | Class seminar on reading assignment | ½ hour | |
| | Lecture 4: *Symbols, heroes and values* | 1 hour | |

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| a) the various layers of culture<br>b) the key issues in the current debate concerning different degrees of tolerance of cultural symbols | Writing and presentation of Team work 1*: Cultural symbols in the current debate in newspapers* (search for relevant articles on the web, setting up of individual dossiers, reading and analysis) | 15 hours<br><br>3 hours | |
| Understanding and being able to identify the different dimensions of cultural differences in approaches to: space, time, equity, hierarchy, high-low context, etc | Group work on 8 short case studies followed by class debate | | One written case study to be analysed (10%) |
| | Presentation of the theoretical perspective on the cultural dimension | 1 and ½ x 8 = 12 hours | |
| | Background reading of selected texts | 12 hours<br><br>1 hour | |
| Understanding processes of<br><br>a)acculturation<br><br>transition from ethnocentrism to ethnorelativism and capacity to articulate own /somebody else's processes | Lecture 5: *Presentation of Bennet's model*, followed by critical perspective by the group. | 1 hour | Write a two-page report based on personal experience (8%) |
| | Lecture 6: *Process of acculturation*, followed by identification of significant steps by the group | 1 hour | |
| | Reading assignment | 4hours | |
| | Personal reflection of themes presented in the lectures | 1 hour | |
| | | 3 hours | |
| Understanding obstacles and roads to intercultural communication.<br><br><br><br>Development of comprehensive listening and capacity to answer in the appropriate cultural key<br><br><br>Development of an attitude of respect and appreciation of diversity | Panel of presenters from different cultures and debate. Reflection exercise | 3 hours | *<br>Self-evaluation (with guides) (8%) |
| | Lecture 7: *Intercultural Communication. Key issues* | 1 hour | |
| | Reading assignment | 3 hours | |
| | Personal reflection of themes presented in the lectures | 1 hour | |
| | Film: "No Man´s Land". | 2 hours | |
| | Class Discussion about the film | 1 hour | |
| | Lecture 8: *The role of perception in intercultural communication* | 1 hour | |
| | Reading assignment | 2 hours | |
| | Which are the main three points of the assigned reading? Debate in class | 2 hours | |
| | Visit to NGO or other type of organisation that works with people from other cultures | 3 hours | |
| Understanding the current challenge of migration | Lecture 9: *Value of Diversity. Migration: variety at our door* | 1 hour | Oral presenta- |

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| and the possible solutions for the future | Reading assignment | 5 hours | tions (all groups) (12%) |
| | Class seminar on reading assignment | 1 hour | |
| Understanding of the debate about models of society and policies for different cultures and migrant groups | Lecture 10: *Managing Diversity* | 1 hour | |
| | Lecture 11: *Images and reality of Multiculturalism* | 1 hour | |
| | Writing and presentation of Team work 2*: Towards Cultural Cohesion. Solutions, laws and policies in Multicultural State* (search for relevant information, reading and analysis) | 15 hours<br><br>3 hours | |
| Awareness of different approaches and issues in research in intercultural communication | Lecture 12: *Main research approaches* | 1 hour | Learning Report (10%) |
| | Group work on Different Research issues | 1 hour | |
| | Preparation of Learning Report | 3 hours | |
| | | 1 hour | |

**Total:**                                                                    **125 hours        100%**

* Class participation, which includes attendance, preparation of reading assignment and class discussion. This relates to the whole course.

**FORM FOR CHECKING WORKLOAD OF AN EDUCATIONAL MODULE**
*(to be completed by the student)*

Programme of Studies:              ----
Name of the module / course unit:   Intercultural Communication in Multicultural Societies
Type of course                     Elective course unit
Level of the module / course unit:  Bachelor
Prerequisites:                     ----
Number of ECTS credits:            5 ECTS (average student working time: 125 hours)

Main competences to be developed:
1. Appreciation of diversity and multiculturality (related to modules X, Y, Z)
2. Capacity to work in multicultural contexts (related to modules A, Z, J)
3. Teamwork (related to modules ....)
4. Oral and written communication (related to modules ....)
5. Capacity for applying knowledge in practice (related to modules ....)
6. Understanding of cultures and customs of other countries
7. Capacity to understand structures of cultural systems     (related to modules ....)
8. Capacity to have an independent judgement on current related issues

| Learning outcomes | Educational activities | Estimated student work time in hours | Assess-ment |
|---|---|---|---|
| Familiarity with diverse approaches to culture and understanding of their implications.<br><br>Understanding and capacity to use in an adequate academic context key concepts such as cultural identity, multiculturalism, integration, assimilation, segregation, context and meaning, etc.<br><br>Development by the student of his or her own mental frameworks in relation to: | Background questionnaire | | Class Partici-pation * (40%)<br><br><br><br><br>Oral presenta-tions (all groups) (12%) |
| | Lecture 1: *Approaches to culture* | | |
| | Group work on definitions of culture | | |
| | Class discussion | | |
| | Reading assignment | | |
| | Class seminar on reading assignment | | |
| | Lecture 2: *Perception and Culture* | | |
| | Reading assignment on the lecture | | |
| | Class seminar on reading assignment | | |
| | Lecture 3: *Cultural identities, group, individual and society* | | |
| | Reading assignment on the lecture | | |
| | Class seminar on reading assignment | | |
| | Lecture 4: *Symbols, heroes and values* | | |

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|---|---|---|---|
| c)a) the various layers of culture<br>d)b) the key issues in the current debate concerning different degrees of tolerance of cultural symbols | Writing and presentation of Team work 1*: Cultural symbols in the current debate in newspapers* (search for relevant articles on the web, setting up of individual dossiers, reading and analysis) | | |
| Understanding and being able to identify the different dimensions of cultural differences in approaches to: space, time, equity, hierarchy, high-low context, etc | Group work on 8 short case studies followed by class debate | | One written case study to be analysed (10%) |
| | Presentation of the theoretical perspective on the cultural dimension | | |
| | Background reading of selected texts | | |
| Understanding processes of<br><br>c)a) acculturation<br><br>b) transition from ethnocentrism to ethnorelativism and capacity to articulate own /somebody else's processes | Lecture 5: *Presentation of Bennet's model*, followed by critical perspective by the group. | | Write a two-page report based on personal experience (8%) |
| | Lecture 6: *Process of acculturation*, followed by identification of significant steps by the group | | |
| | Reading assignment | | |
| | Personal reflection of themes presented in the lectures | | |
| | | | |
| Understanding obstacles and roads to intercultural communication.<br><br><br><br>Development of comprehensive listening and capacity to answer in the appropriate cultural key<br><br><br>Development of an attitude of respect and appreciation of diversity | Panel of presenters from different cultures and debate. Reflection exercise | | *<br>Self-evaluation (with guides) (8%) |
| | Lecture 7: *Intercultural Communication. Key issues* | | |
| | Reading assignment | | |
| | Personal reflection of themes presented in the lectures | | |
| | Film: "No Man´s Land". | | |
| | Class Discussion about the film | | |
| | Lecture 8: *The role of perception in intercultural communication* | | |
| | Reading assignment | | |
| | Which are the main three points of the assigned reading? Debate in class | | |
| | Visit to NGO or other type of organisation that works with people from other cultures | | |
| Understanding the current challenge of migration and the possible solutions for the future | Lecture 9: *Value of Diversity. Migration: variety at our door* | | |
| | Reading assignment | | |
| | Class seminar on reading assignment | | |
| | Lecture 10: *Managing Diversity* | | |

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|---|---|---|---|
| Understanding of the debate about models of society and policies for different cultures and migrant groups | Lecture 11: *Images and reality of Multiculturalism* | | Oral presenta-tions (all groups) (12%) |
| | Writing and presentation of Team work 2*: Towards Cultural Cohesion. Solutions, laws and policies in Multicultural State* (search for relevant information, reading and analysis) | | |
| Awareness of different approaches and issues in research in intercultural communication | Lecture 12: *Main research approaches* | | Learning Report (10%) |
| | Group work on Different Research issues | | |
| | Preparation of Learning Report | | |
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**Total:** **……..** **100%**

* Class participation, which includes attendance, preparation of reading assignment and class discussion. This relates to the whole course.