

## The second module of Creative Technology in 2013-2014

### General observations about TOM (Twents Onderwijs Model)

TOM means for the University of Twente to have bachelor's degrees programmes consisting of 12 units of study, each with a study load of 15 EC (420 hrs.).

Teaching and examination of each of these units is offered in a 10 weeks period (quarter), except the final project module (bachelor's thesis) and modules in parallel to the final module, which take a 20 weeks period (semester).

Important considerations to adopt this model (neither the organizational nor the financial ones) are:

1. Studying units in series, and not in parallel, is more effective
2. Integral assessment of students over a larger spectrum of goals is desirable, and better than testing and marking separate units.
3. In larger units the options to offer the students "learning in context" (which is translated into: learning in projects) are better than they are in smaller units.

### Curriculum changes CreaTe

In 2013-2014 we will see a major change in the Creative Technology curriculum.

As a consequence of the introduction of TOM (twents onderwijsmodel) all units of study of the first year in 2013-2014 will have a study load of 15 EC (420 hrs.). These 15 EC units are called *modules*.

In due time the examination programme will become as pictured below. The units of quarters 1 through 6 are fixed units, mandatory for all CreaTe students. The units in quarters 7 and 8 are specialization or track units.

In quarters 9 and 10 the student chooses profiling units, from (hopefully) a range of available units.

In the final semester (quarters 11 and 12) there is a final project, in parallel with a final unit.

Quarter	Module	
1	M 1	
2	M 2	
3	M 3	
4	M 4	
5	M 5	
6	M 6	
7	(Limited) Choice of specialization unit	
8	(Limited) Choce of specialization unit	
9	Choice of profiling module	
10	Choice of profiling module	
11	Final Project	Last module
12	BSc	

A curriculum committee is being installed which will advise on the appropriate rearrangement (and/or changes) in the current curriculum, in order to fit best in this scheme. But this will take time.

This note is about the second module in 2013-2014.

## The name of the second module

I propose the name ?????? for the second module.

## The contents of the second module, and their deliverables

1. *Creative Application 2*; students deliver a Smart Environment, plus reports
2. *Project structuring and reporting workshop*; students make assignments (related to 1)
3. *Sketching tutorials*; students get instruction and make assignments
4. *Introduction to Mathematics and Modelling tutorials*; students get instruction and make assignments
5. *Programming workshop*; students make assignments
6. *Physical Computing workshop*; students build arduino applications
7. *Engineering our digital future workshop*; students make assignments.
8. *Personal Profile course*; students deliver what the course requires

## Relationship with current situation

Subjects 1, and 2 are covered in the existing course Smart Environments (Scholten, Van de Voort)

Subject 3 is the course Sketching (Van Passel, Zwart)

Subject 4 is the course Introduction to Mathematics and Modelling (Sterk)

Subjects 5 and 6 are covered in the course Programming and Physical Computing (Mader, Dertien)

Subject 7 is *new!*

Subject 8 is part of the course First Year Portfolio. Most students use it to add "Physics build-up" to their personal profile.

## The module examination

The 8 subjects will appear as 8 separate items, each with a mark on the grade list of the student, detailing the final grade for the second module, called ??????.

The items 2 (Project structuring and reporting workshop), 7 (Engineering our Digital Future) and 8 (Personal Profile course) will be graded by Pass or Fail.

A Pass for each of these three items is necessary to get a grade for the unit as a whole.

The other five items (Creative Application 2, Sketching, Introduction to Mathematics and Modelling, Physical Computing, and Programming) are graded on the usual 1-10 scale. The mark for the whole ??? unit will be the average of these four. Additional requirements regarding minimum marks for each of these four will have to be established.

There will be a 9<sup>th</sup> item in the details list for this module. Its provisional title is "Supplementary assessment". All students who pass the module on the basis of the results of the 8 official subjects will get an exemption from this assessment. But in case of doubt (further to be specified), the Examination Board may grant the supplementary assessment to a student. A sufficient mark for the supplementary assessment will make the total mark for the module a 6.

## Scheduling teaching activities

Teaching activities in the current situation are restricted to the first 8 weeks of the 10 weeks quarter.

The final two weeks are reserved for finishing the work on deliverables, and for presentation and assessment of that work, as well as for written exams.

This situation will not change drastically.

The intention is to schedule (per student) 30 hours of lecturing in the first 8 weeks, to schedule 160 workshop hours in the first 8 weeks, to schedule 40 group work hours in weeks 5-10, to schedule 20 hand-in/test hours in weeks 1-10, and to schedule 16 presentation hours in week 10. Adding 30 hours for personal profiling and tutoring activities, leads to a total of 286 hours.

The remaining 126 hours are to be used for self-study.