

TRANSITIONAL ARRANGEMENTS APPENDIX TO THE TEACHING AND EXAMINATION REGULATIONS OF THE BACHELOR'S PROGRAMME CREATIVE TECHNOLOGY

The regulations in this appendix form an integral part of the teaching and examination regulations of the bachelor's programme Creative Technology of the Faculty of Electrical Engineering, Mathematics and Computer Science of the University of Twente.

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Art 1.1 - APPLICABILITY OF THESE TRANSITIONAL ARRANGEMENTS

1. This transitional arrangements appendix is applicable to all students who were already enrolled for the Bachelor's programme Creative before September 1, 2013. This concerns the situation prior to the introduction of the Twente Educational Model (Dutch: Twents Onderwijs Model or TOM). This situation will be referred to as preTOM.
2. This transitional arrangement appendix has the following outline. Article 1.2 lists the content of the program and examinations such it was offered in the last year of the preTOM situation, i.e. the first year program as taught in 2012-2013, the second year program as taught in 2013-2014 and the third year program as taught in 2014-2015. Article 1.3 lists the conditions of admission to the units of study mentioned in article 1.2 of this appendix. Finally, appendix 1.4 lists the transitional arrangements for all students who were already enrolled for the Bachelor's programme Creative Technology before September 1, 2013.

Art 1.2 - PRE-TOM PROGRAMME CONTENTS AND EXAMINATIONS (A)

1. Students who were already enrolled for the Bachelor's programme Creative before September 1, 2013, pass the bachelor's examination by completing¹ the units of study of tables 1, 2 and 3.

¹ To complete a unit means to pass the unit's assessment with a sufficient result.

2.
 - a. The units of study of table 1 are no longer taught as separate units (as of September 1, 2013). Provisions for completing these units are in article 1.4 of this Transitional arrangements appendix.
 - b. The units of study of table 2 are no longer taught as separate units (as of September 1, 2014). Provisions for completing these units are in article 1.4 of this Transitional arrangements appendix.
 - c. The units of study of table 3 are no longer taught as separate units (as of September 1, 2015). Provisions for completing these units are in article 1.4 of this Transitional arrangements appendix.
3. At the end of the first year students who were already enrolled before September 1, 2013, must choose between two options for a specialization course in their second year: Smart Technology and New Media.
4. Students have to choose courses with a study load of 30 EC in semester 5 (the first half of the third year of the programme), which is called the *profileringsruimte* in case of the preTOM program and is called the minor space in case of the TOM program. Students must choose courses in their *profileringsruimte* consisting of
 - courses to prepare for further study in a Master's programme, i.e. a premaster program which can exist of separate courses or from assigned premaster modules.
 - the alternative module of their second year Smart Technology or New Media specialization (15 EC), and combine this with a choice of other courses with a 15 EC study load in total, to make an individual 30 EC minor. Smart Technology and New Media are now taught as module 5 (in the first quartile of the second year). Students can choose the corresponding module that serves as a replacement for their opposite specialisation course in their *profileringsruimte*.
 - a standard or individual minor programme. At this university the standard minor programme now consist of modules. These can be High Tech Human Touch modules, join-in modules (i.e. "broadening" modules, modules which belong to other UT Bachelor's programmes), deepening modules, leren lesgeven, crossing borders modules or a board minor.
 - students can take one semester of courses at another (foreign) university (which is in fact a special kind of an individual minor),
 - and possibly more.
5. The student's choice of courses and modules in semester 5, the *profileringsruimte*, must meet the requirements of Article 1.3 of this transitional arrangements appendix.
6. Students who were already enrolled before September 1, 2013 have to choose *electives* in their third year totalling at least 15 EC. Their choice of electives serves at least two purposes:
 - students are confronted with a view on and research into the human-technology relationship which is largely inspired by behavioural or management sciences,

- students work on ethics and professional standards for design.

Table 3 contains the list of electives. The text below the table elaborates the options for a student to deviate from this list.

7. To pass their degree students complete a graduation project.
 - a. In their Final project at the end of their third year students who were already enrolled before September 1, 2013 complete a graduation project with a study load of 15 EC.
 - b. The graduation project consists of
 1. A design project, where context and goals are set preferably by an external party.
 2. A graduation report, with appendices when necessary, in which the student renders account of the graduation project and the design approach, and describes and documents literature search, surveys and experiments conducted during the project, as well as the prototypes and other deliverables which result from the project.
 3. An abstract of the graduation report.
 4. A public presentation and defence of the graduation work.
 - d. Students enrolled before September 1, 2013 can start the graduation project only at the beginning of a semester, i.e. in September or February. The deadline for their graduation project is at the end of the semester in which it started. This period of time cannot be extended. If the deadline is not met, the examiners will assess the graduation project anyway. This may result in a fail.
8. The Examination Board may decide that students pass their examination even if some results are insufficient. The rules set by the Examination Board for passing examinations are in the *Rules and Regulations* of the Examination Board.

Table 1: the first year for students already enrolled before September 1, 2013

	study load in EC	assessment ²	enablers
We Create Identity	5	Q1	
Smart Environments	4	Q2	ST
Living and Working Tomorrow	5	Q3	
Have Fun and Play!	5	Q4	
Visual Communication	4	Q1	NM
Sketching for CreaTe	3	Q2	
Interactive Visualization	4	Q3&Q4	NM
Designing in Context	3	Q3	
Human Factors	3	Q4	
Introduction to Computer Science	2	Q1	
Programming and Physical Computing	7	Q1&Q2	NM
Introduction to Physical Systems and their Dynamic Behaviour	5	Q3	ST
Introduction to Mathematics and Modelling	6	Q2&Q3	ST
First year portfolio	4	Q1-Q4	P
Year 1	60		

The abbreviations for enablers must be read as follows

- NM (New Media) students must have completed these units before they can participate in the New Media course of the second year (see article 1.3 of this transitional arrangements appendix).
- ST (Smart Technology) students must have completed these units before they can participate in the Smart Technology course of the second year (see article 1.3 of this transitional arrangements appendix).
- P students must have completed the first year portfolio before they can participate in the second year portfolio.

² The column contains quarters where subtests have to be taken within the modular (TOM) curriculum to fulfil the assessment requirements, since there will be no more examinations for these units.

Table 2: the second year for students already enrolled before September 1, 2013

	study load (EC)	assessment ³	prerequisites
Ambient Screens	5	Q2	45
Hybrid Worlds	5	Q4	45
Creative Explorations in Art, Science and Technology	2	-- ⁴	45
Animated Narration	3	Q1	45
Innovation and Entrepreneurship for IBA	3	Q3	45
Startrix for CreaTe	5	Q3	45
Programming with Structures	5	Q4 + Q2	45
Web Services and Data-driven Applications	4	Q4	45
Introduction to Probability and Statistics	3	Q4	45
Research Methodology	2	Q2	45
Systems and Signals	3	Q1	45
either Strategies and Protocols	3	Q3	45
or Queues and logistics	3	⁵	45
<i>either Smart Technology</i>	15	Q1-4	45+ST
<i>or New Media</i>	15	Q1-4	45+NM
Second Year Portfolio	2		45+P
Year 2	60		

The two pairs of units preceded by “either...or” are options. Each student has to complete at least one of the units of each pair.

The units which are printed in italics are specific for a specialization. Students who opt for Smart Technology take the Smart Technology unit. Students who opt for New Media take the New Media unit. Both units have a study load of 15 credits.

³ The column contains quarters where subtests have to be taken within the modular (TOM) curriculum to fulfil the assessment requirements, since there will be no more examinations for these units.

⁴ This unit is to be completed by individual appointment

⁵ This unit is to be completed by individual appointment.

The prerequisites in table 2 must be understood as follows (see also article 1.3 of this transitional arrangement appendix):

- 45 To participate, students must have completed units of the first year with a total study load of at least 45 EC
- +NM (New Media) To participate, students must have completed the NM enablers of table 1.
- +ST (Smart Technology) To participate, students must have completed the ST enablers of table 1.
- +P To participate, students must have completed the first year portfolio.

Table 3: the third year for students already enrolled before September 1, 2013

	study load (EC)	teaching activities ⁶	prerequisites
Free space to establish a profile (profielingsruimte or minor space)	30		90
<i>Electives, choice from</i> <i>Cyber Crime Science, 6EC</i> <i>Remote Care Nearby, 5EC</i> <i>Entertainment Education, 5EC</i> <i>Communication Technology for Global Work, 5EC</i> <i>Ethics for CreaTe, 5EC</i>	15		90
Final Project	15		150
Year 3			

More information on modules for the *profielingsruimte* (minor) programme is available at the university's [Major-minor website](#)⁷

The range of modules available at the University of Twente for the minor programme can be found on the above website and in article 1.9 of the programme appendix. But the minor programme can also consist of courses at another (foreign) university.

The units of table 3 which are printed in italics describe electives and options for the student. See articles 1.2.4 and 1.2.6 of this appendix.

⁶ This column is empty since these units are no longer taught, see article 1.4 of this appendix for the correct transitional arrangements.

⁷ <http://www.utwente.nl/en/education/electives/minor/>

Provisions for the choice of options and electives are further elaborated in article 1.3.2 of this appendix.

Students may replace Ethics for Creative Technology by other Ethics courses, if their tutor approves. Students may propose to take other courses as elective than the courses in the list; however, they need explicit permission of the Examination Board to take an elective (non-ethics) course which is not in the list.

The prerequisites must be understood as follows (see also article 1.3 of this appendix)

- 90 To participate in these units of study, students must have completed units of their first and second year totalling at least 90 credits.
- 150 To start the Final Project, students must have completed 150 EC of the entire programme.

Most of the elective courses are no longer available as separate individual courses. Article 1.4, regulation 6 of this transitional arrangements appendix explains how to fulfil assessment requirements for these electives.

Art 1.3 - CONDITIONS OF ADMISSION TO UNITS OF STUDY (S)

Specific conditions of admission to (i.e. prerequisites for) units of study are in the tables of Article 1.2 of this appendix, where the units of study are listed. For units of the second year these requirements partly coincide with the conditions for a notice of admission.

1. To participate in the units of study of the second year of table 2 the following conditions must be met:
 - a. There is a registration as either New Media or Smart Technology student
 - b. Study units of the first year with a total study load of at least 45 credits have been completed.
 - c. (Math) To take either Queues and Logistics or Strategies and Protocols (now Module 7 – Thinking Strategically), the student's registration for the course of his/her choice must have been accepted. There is a registration procedure for students to apply for participation, the number of participants for each course is limited.
 - d. (ST) To take Smart Technology as a specialization in the second year, the enabling units of the first year must have been completed. The enabling units for ST are (see also table 1)
Smart Environments
Introduction to Physical Systems and their Dynamic Behaviour
Introduction to Mathematics and Modelling
 - e. (NM) To take New Media units as a specialization in the second year, the enabling units of the first year must have been completed. The enabling units for NM are (see also table 1)
Visual Communication
Interactive Visualization
Programming and Physical Computing

2. To participate in units of the third year, the following conditions must be met
 - a. Study units of the first and second years must have been completed with a total study load of at least 90 credits.
 - b. (*profileringsruimte*) The second year tutor has given permission (on behalf of the Examination Board) for the courses in the *profileringsruimte*; the tutor has the authority to refuse permission even if a proposed choice of courses meets the requirements b1, b2 and b3.
 - b1. (*profileringsruimte*) The units of study in the *profileringsruimte* are courses offered by an institution or programme which has an accreditation proving its university level, or comparable. The Examination Board may rule otherwise in individual cases.
 - b2. (*profileringsruimte*) The units of study of an introductory nature among the courses in the *profileringsruimte* have a total study load of at most 20 EC.
 - b3. (*profileringsruimte*) The units of study devoted to foreign culture and language among the courses in the *profileringsruimte* have a total study load of at most 10 EC
 - c (*electives*) The second year tutor has given permission (on behalf of the Examination Board) for the choice of electives; the tutor has the authority to refuse permission even if a proposed choice of courses meets the requirements c1, c2, c3 and c4.
 - c1 (*electives*) At least one unit among the electives deals with ethics and professional standards.
 - c2 (*electives*) other units among the electives deal with research into human-product relationships, from the perspective of behavioural and/or management sciences, except for students who opt for an effort as described under c3 or c4.
 - c3 (*electives*) one unit among the electives, with a study load of 5 EC maximum, can be an assistantship in a final project of a fellow student. It must be clear that the student doing the final project defines the work of the assistant, and acts as his or her manager. An examiner appointed by Examination Board is responsible for the assessment of the assistant's work.
This option cannot be combined with the option under c4. The Examination Board sets rules for assistantships.
 - c4 (*electives*) one unit among the electives, with a study load of 5 EC maximum, can be devoted to academic writing. (*201300223 Academic Writing for CreaTe*) This option cannot be combined with the option under c3.
 - c5 (*electives*) one unit among the electives can be devoted to study tour preparation. (*201300292 Study Trip Theme Course*) This option is available only for participants in a study tour, and cannot be combined with option under c3.
3. To start their Final Project, students must have completed units totalling 150EC of the programme.

Art 1.4 - TRANSITIONAL ARRANGEMENTS

1. [Expired] Regulation 2012-2013 regarding the first year's exam (propedeuse)

Occasion: This regulation is necessary because the first year's programme changes, starting September 2012.

The earlier regulation regarding study units of the first year of 2011-2012 is incorporated in this regulation.

Term of validity: expired; still recorded for the purpose of reference.

Contents of the regulation:

To complete their first year, students who were first enrolled in 2010-2011 or 2011-2012 must comply to provisions 1 – 4. Where these provisions speak of “lines” and “columns”, they refer to lines and columns in *Table 4 - first year courses in the academic years 2010-2011, 2011-2012, 2012-2013*.

1 (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)
To meet the requirements of the first year, a unit of study (or a combination of units, when applicable) must be completed at each of the lines 1 through 13 of table 4. The unit which is completed can be a unit from a column corresponding to a later academic year than the year of the student's first enrolment. It can never be a unit from a column corresponding to an academic year preceding the year of first enrolment.

2a. (Applies only to students who were first enrolled in 2010-2011)
To meet the requirements of the first year, units from lines 14 – 16 must be completed, with a study load which is enough to reach a total first year study load of (at least) 60 EC.

2b. (Applies only to students who were first enrolled in 2011-2012)
To meet the requirements of the first year, the First Year Portfolio course (line 14) must be completed.

3. (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)
Tests passed for Introduction to Computer Science (line 1), Interactive Visualization (line 10), and/or Introduction to Dynamical Systems and their Dynamic Behaviour (line 13) during the academic year 2012-2013 in order to comply to provision 1, may be regarded as resits for tests for the corresponding courses of the academic year 2011-2012, and the results can hence be registered for those courses, with the study load of 2011-2012.

4. (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)
If the student's first year course programme complies to provisions 1 and 2 (either 2a or 2b), but totals less than 60 EC in study load, the student's tutor will issue a supplementary assignment to meet the requirement that the first year programme must have a 60 EC study load.

2. [Expired] Regulation 2012-2013 regarding the second year programme and the Bachelor's exam

Occasion: This regulation is necessary because the second year programme changes, starting September 1, 2012.

Term of validity: expired; still recorded for the purpose of reference.

Contents of the regulation:

To meet the second year requirements towards their bachelor's exam, students who were first enrolled in 2010-2011 or 2011-2012 must comply to provisions 1 – 3, called the initial requirements, and the additional requirements laid down in provisions 4a, 4b, 5 and 6. Where these provisions speak of "lines" and "columns", they refer to lines and columns in *Table 5 - second year courses in the academic years 2011-2012 and 2012-2013*.

1 (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)

To meet the requirements of the second year, a unit of study must be completed at each of the lines 1 through 7 of table 5.

The unit which is completed can be a unit from a column corresponding to a later academic year than the year of the student's first enrolment. It can never be a unit from a column corresponding to an academic year preceding the year of first enrolment.

2 (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)

To meet the requirements of the second year, the student must complete units with a study load totalling 15 EC for his/her specialization, either New Media or Smart Technology.

For Smart Technology it is necessary to complete units on line 8 (of table 5). When applicable, the result of a subtest of the 15 EC Smart Technology course in the 2012-2013 column may be registered in the student information system as a result for the (applicable) "old" course of the 2011-2012 column.

New Media is completed by combining results for units on lines 9, and 17 – 20. A result for a subtest of the 15 EC New Media course in the 2012-2013 column cannot be registered as a result for an "old" course in the 2011-2012 column. But conversely, results for courses in the 2011-2012 column may be recognized by the New Media examiner as grounds for exemption from subtests in the 15 EC New Media course.

It is possible for the New Media examiner to register results for separate courses corresponding to parts of the 15 EC New Media course. These separate courses are Sound Engineering, Graphics, Game Development, and Serious Gaming. They are distinct from each of the "old" courses in the 2011-2012 column, but a student may use them to combine with results for courses in the 2011-2012 column to accumulate the required 15 EC study load in New Media results. Note however that a result for Game Development as part of the 15 EC New Media course cannot be combined with a result for Game Development in the 2011-2012 column. A combination of 3D Modelling (2011-2012) and Graphics (part of 2012-2013 New Media) is equally impossible.

3. (Applies to all students who were first enrolled in either 2010-2011, or 2011-2012)

To meet the requirements of the second year, one of the units of study at the lines 10 and 11 of table 5 must be completed.

4a (Applies to students who were first enrolled for 2011-2012)

To meet the requirements of the second year, the units at lines 12 – 16 in the 2012-2013 column of table 5 must be completed.

4b (Applies to students who were first enrolled for 2010-2011)

To comply with provisions 1 – 3 units with a total study load of 45,5 EC (minimum) and 52 EC (maximum) must be completed. To meet the requirements of year 2, the units completed in order to comply with provisions 1 – 3 must be supplemented by additional units.

Firstly, it is mandatory to complete units from the following list. They will count as a supplement to the units that are used to comply with 1 – 3, unless they have already been used to meet other requirements.

1. Systems and Signals (line 14) must be completed, but it counts as a supplement only if it has not been used to meet first year's requirements;
2. Introduction to Statistics and Probability (line 15) must be completed, but it counts as a supplement only if it has not been used to meet first year's requirements;
3. One of the two units at line 12, Web Services and Data-driven Applications in the 2012-2013 column and Data-driven applications in the 2011-2012 column, must be completed, and will count as a supplement. If both are completed, only one can count. However, the obligation to complete one of the line 12 courses ceases if Web 2.0 Mashups is completed, and not used to meet the New Media requirements of provision 2. Then Web 2.0 Mashups counts as a supplement for his provision 4b, instead of one of the line 12 courses.

Secondly, the student may use other units that have been completed as a supplement. Completion is not mandatory, but the study load of the units in support of the initial requirements (provisions 1 – 3) together with the supplementary units, must add up to a total study load of at least 58 EC. The optional units are

4. The units at lines 10,11,17 and 18, but (obviously) **not** the ones that have been used to meet initial requirements, or as substitute for a mandatory supplement in 4b under 3
5. Research Methodology.
6. Second Year Portfolio, but only if Research Methodology is also used as a supplementary unit.

5 (Applies to students who were first enrolled for 2010-2011)

If the student's first year course programme complies to provisions 1 – 3 and 4b, but totals less than 58 EC in study load, the student's tutor will issue a supplementary assignment.

6 (Applies to students who were first enrolled for 2010-2011)

If the student's second year course programme complies to all provisions but totals to a study load which is not exactly 60 EC (at least 58 is mandatory), the difference (both shortage and excess) will be compensated in the "profileringsruimte".

3. [Expired] Regulation 2013-2014 regarding the units of study of the first year

Occasion: This regulation is necessary because the first year's programme changes, starting September 2013.

More specifically, none of the units of study of Table 1 in Art 1.2 of this transitional arrangement appendix of the teaching and examination regulations will be offered (nor examined) in (nor after) 2013-2014.

Term of validity: expired; still recorded for the purpose of reference.

Contents of the regulation:

Students who started their studies before September 1, 2013 can take their first year's exam if they meet the following requirement:

For every unit of study of Table 1 in Art 1.1 of the programme appendix of the teaching and examination regulations they have completed a substitute (if not the unit itself), i.e.

1. They have completed units of study of Table 1; and
2. For units that were not completed they have completed applicable substitute units, in accordance with Regulation 1 of this article in these *Transitional arrangements*, or
3. For units that were not completed they have successfully passed (sub)tests in one of the four modules of the 2013-2014, 2014-2015 or 2015-2016 programme,

The modules (15 EC units of study of the 2013-2014, 2014-2015 or 2015-2016 programme) consist of parts which correspond to first year courses of 2012-2013.

Table 1 in Art 1.2 of this transitional arrangements appendix of the teaching and examination regulations indicates in which of the 4 modules these corresponding elements can be found.

The substitute (sub)tests will be in the corresponding quarters.

4. [Expired] Regulation 2013-2014 regarding the first year's exam (propedeuse)

Occasion: This regulation is necessary because the first year's examination is no longer an official examination of the bachelor's programme, starting September 1, 2013.

Term of validity: expired; still recorded for the purpose of reference.

Contents of the regulation:

Students enrolled at the University of Twente in the academic year 2012-13 for the first (propedeuse) year of the Bachelor's programme, can take the propedeuse examination, and, if they pass that examination, will receive the propedeuse diploma. The opportunity to take the examination ceases to exist per September 1, 2014.

5. [Expired] Regulation 2014-2015 regarding the units of study of the second year

Occasion: This regulation is necessary because the second year's programme changes, starting September 2014.

More specifically, none of the units of study of Table 2 in Article 1.2 of the transitional arrangements appendix of the teaching and examination regulations will be offered in (nor after) 2014-2015.

Term of validity: expired; still recorded for the purpose of reference.

Contents of the regulation:

Students who started their studies before September 1, 2013 can take their Bachelor's exam if they meet the following requirement regarding the courses of the second year (and obviously also all requirements regarding their first and third year):

For every unit of study of Table 2 in Art 1.2 of the transitional arrangements appendix of the teaching and examination regulations they have completed a substitute (if not the unit itself), i.e.

1. They have completed units of study of Table 2; and
2. For units that were not completed they have completed substitute units, in accordance with Regulation 2 of this article in the *Transitional arrangements*, or
3. For units that were not completed they have successfully passed (sub)tests in one of the modules of the 2014-2015, 2015-2016 or 2016-2017 programme,

The modules (15 EC units of study of the 2014-2015 programme) consist of parts which correspond to second year courses of 2013-2014 as shown in Table 2 of article 1.2.

Table 2 in Article 1.2 of this transitional arrangements appendix of the teaching and examination regulations indicates in which of the modules these corresponding elements can be found.

The substitute (sub)tests will be in the corresponding quarters.

6. Regulation 2015-2016 regarding elective units of the third year

Occasion: This regulation is necessary because the third year's programme changes, starting September 2015.

More specifically, some of the elective units of study of Table 3 in Article 1.2 of this transitional arrangements appendix of the teaching and examination regulations will no longer be offered in (nor after) 2015-2016.

Term of validity: until September 1, 2018.

Contents of the regulation:

Students who started their studies before September 1, 2013 can take their Bachelor's exam if they meet the following requirement regarding the courses of the third year (and obviously also all requirements regarding their first and second year):

They have completed elective courses with a study load totalling (at least) 15EC in accordance with the provisions of Table 3, i.e.

They have completed units of study of Table 3, and/or alternative units in consultation with their tutor and/or the Examination Board, and/or parts of second or third year modules as a replacement of one or more units of Table 3.

- The "Ethics and professional responsibilities" track of the second year module Innovation and Entrepreneurship (see programme appendix, Article 1.1, Table 7) counts as a replacement for the elective course Ethics for CreaTe
- The "Real World Challenge" track in the pre-Final module (see programme appendix, Article 1.1, Table 11) can count as a replacement for either Entertainment Education, Remote Care Nearby, Cyber Crime Science or Communication Technology for Global Work)
- The Academic Writing track in the Pre-Final module (see programme appendix, article 1.1, Table 11) counts as an elective substitute for academic writing (see this appendix, article 1.3.2.c4)
- The elective assistantship in a final project of a fellow student (see this appendix, article 1.3.2.c3) can still be completed since it concerns an individual assignment. It must be clear that the student doing the final project defines the work of the assistant, and acts as his or her manager. An examiner appointed by Examination Board is responsible for the assessment of the assistant's work.

TABLE 4 - FIRST YEAR COURSES IN THE ACADEMIC YEARS 2010-2011, 2011-2012 AND 2012-2013

	2010-2011		2011-2012			2012-2013		
		EC		EC			EC	
1	Introduction to Computer Science	3	Introduction to Computer Science	3		Introduction to Computer Science	2	-1
2	Web technology We Create Identity	3 3	We Create Identity	5	-1	We Create Identity	5	
3	Smart Environments	3	Smart Environments	3		Smart Environments	4	+1
4	Living and Working Tomorrow	6	Living and Working Tomorrow	5	-1	Living and Working Tomorrow	5	
5	Have Fun and Play!	6	Have Fun and Play!	5	-1	Have Fun and Play!	5	
6	Sketching for CreaTe	2	Sketching for CreaTe	2		Sketching for CreaTe	3	+1
7	Graphic Design	2	Visual Communication	4	+2	Visual Communication	4	
8	Designing in Context	2	Designing in Context	2		Designing in Context	3	+1
9	Human Factors	3	Human Factors	3		Human Factors	3	
10	Interactive Visualization	5	Interactive Visualization	5		Interactive Visualization	4	-1
11	Programming for CreaTe	5	Programming and Physical Computing	7	+2	Programming and Physical Computing	7	
12	Creative Exploration of Structures Motion and Modelling	2 3	Introduction to Mathematics and Modelling	6	+1	Introduction to Mathematics and Modelling	6	
13	Dynamical systems	6	Dynamical systems	6		Introduction to Physical Systems and their Dynamic Behaviour	5	-1
14			First Year Portfolio <i>This is a new unit compared to 2010-2011</i>	4	+4	First Year Portfolio	4	
15	Systems and Signals	3	<i>Systems and Signals is now a second year course</i>		-3			
16	Introduction to Statistics and Probability	3	<i>Introduction to Statistics and Probability is now a second year course</i>		-3			
					9			3

13 lines in the table show units (in 2010-2011 combinations of 2 units) which persisted throughout the three academic years.

Line 14 shows a unit which has been introduced in 2011-2012.

Lines 15 and 16 show units which were first year units in 2010-2011, but which since moved to the second year programme.

Almost all of the persisting units changed over the three academic years, with a change in study load as indicated. (In 2011-2012 a load of 9 EC has been reallocated, in 2012-2013 the reallocation totalled 3 EC)

TABLE 5 - SECOND YEAR COURSES IN THE ACADEMIC YEARS 2011-2012 AND 2012-2013

2011-2012 (for students first enrolled in 2010)		EC	2012-2013 (for students first enrolled in 2011)		EC
1	Ambient Screens	6,5	Ambient Screens	5	-1,5
2	Hybrid Worlds	7,5	Hybrid Worlds	5	-2,5
3	Creative Explorations in Art, Science and Technology	2	Creative Explorations in Art, Science and Technology	2	
4	Advanced Graphic Design	2,5	Animated Narration	3	+0,5
5	Marketing for IBA	5	Innovation and Entrepreneurship for IBA	3	-2
6	Project Startrix	5	Startrix for CreaTe	5	
7	Programming with structures	5	Programming with Structures	5	
8	Introduction to electronics	4	Smart Technology	15	
	Wireless communication systems	4			
	Control systems	4			
	Sensors	3			
9	<i>New Media courses of 2011-2012 are in lines 18-20</i>		<i>New Media (contents changed compared to 2011-2012)</i>	15	
10	Strategies and Protocols	3	Strategies and Protocols (now Module 7 – Thinking Strategically)	3	
11	Queues and logistics	3	Queues and logistics	3	
12	Data-driven Applications	3	Web Services and Data-driven Applications (<i>Data-driven applications combined with Web 2.0 Mashups</i>)	4	+1
13	<i>Systems and Signals was a first year course for students of 2010</i>		Systems and Signals	3	
14	<i>Intro Statistics and Probability was a first year course for students of 2010</i>		Introduction to Statistics and Probability	3	
15			Research Methodology (<i>new course compared to 2011-2012</i>)	2	
16			Second year portfolio (<i>new course compared to 2011-2012</i>)	2	
17	3-D Modelling	2,5	<i>3-D modelling is now part of New Media</i>		
18	Web 2.0 Mashups	3	<i>Web 2.0 Mashups is now part of Web Services and ... (cf line 12)</i>		
19	Game Development	6	<i>Game Development is now partly incorporated into New Media</i>		
20	Virtual Environments	6	<i>Virtual Environments ceased to exist</i>		

In 2011-2012 the four courses combined in line 8 were Smart Technology specialization courses; in 2012-2013 there was a single 15 EC specialization course Smart Technology, with the same contents.

In 2011-2012 the courses in lines 18-20 were New Media specialization courses; in 2012-2013 there was a single 15 EC New Media specialization course, with different contents. The new 15 EC New Media course combines Sound Engineering (absent the year before), Graphics (was 3D Modelling the year before), Game Development (part of the Game Development course of the year before) and Serious Gaming (which was absent the year before)

In 2012-2013 students could choose between the math courses of lines 10 and 11; the year before it was mandatory to take both.