

curriculum *creative technology*

from a *new media* perspective

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abstract In this brief report an outline is given of how a first year curriculum of *creative technology* may look like, proceeding from the assumption that equal attention is given to the constituting subdisciplines of *creative technology*, that is *computer science*, *new media*, *smart technology*, *mathematics* and *industrial design*, and that a substantial part of the curriculum is devoted to integrative *creative applications*.

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introduction

Summarizing, we may formulate the educational targets of the *creative technology* curriculum as follows:

educational targets – *creative technology*

- **skill(s)** – *computing, mathematics, simulation, technology*
- **knowledge** – *computer & software architecture, human factors*
- **theory** – *systems engineering, media & communication*
- **experience(s)** – *project(s), deployment in social context*
- **attitude** – *initiative, creative, involved*

The scope of the curriculum is also determined by the contribution of what may be regarded the constituting (sub) disciplines of *creative technology*:

CS – computer science
NM – new media
ST – smart technology
MA – mathematics
DE – design

CA – creative applications

with *creative applications* as an essential integrative element in the curriculum.

creative technology – foundation(s)

When each of the sub-disciplines takes an equal share in the first year, which is meant to lay the foundations for further specialisations, it seems fair to devote 9 credits to each, leaving a total of 15 credits for *creative applications*. An indication of how the elements for each track could be is given below.

course	credits	description
CS1	3	computer & network architecture(s)
CS2	6	programming fundamental(s) – C++/Java
NM1	3	web technology (1) – html, javascript. css
NM2	6	animation in 2D
ST1	3	smart technology (1) – smart systems
ST2	6	smart technology (2) – sensor design & instrumentation
MA1	6	mathematics essentials with matlab
MA2	3	the (he)art of mathematics
DE1	6	drawing & modeling
DE2	3	human factors in design
CA1	3	<i>we create identity</i>
CA2	6	<i>living & working tomorrow</i>
CA3	6	<i>have fun and play!</i>

Naturally, each of the tracks or sub-disciplines may take responsibility for the details of the courses.

first year – curriculum

As a first proposal for distributing the courses over the period of the first year, we may think of:

period	course(s)	
1	CA1/CS1	introduction
2	MA1	mathematical skills
3	NM1/ST1	introduction specialisation(s)
4	DE1	industrial design
5	CA2	<i>living & working tomorrow</i>
6	NM2/ST2	specialisation(s)
7	NM2/ST2	continued
8	MA2/DE2	mathematics & design
9	CS2	programming fundamentals
10	CA3	<i>have fun and play!</i>

This proposal stems from the wish to have a proper alteration between technical/disciplinary courses and introductory/explorative courses. It also does explicitly not exclude mutual connections between the various tracks, that is topics and subjects that are dealt with commonly, from different perspectives.

follow up – new media & smart technology

In later years, students will choose for a specialisation in either the *new media* or *smart technology* track. However, from a *new media* perspective, it should be clear that both in the computing track as well as the creative applications track, a close relation with smart technology might be desirable.

Additional courses in *computing* and *new media* will include:

course	credits	description
CS3	6	advanced programming – idoms, APIs
NM3	3	web technology (2) – php, web services
NM4	6	3D virtual environments – x3d/vrml
CA2	6	<i>living & working tomorrow</i> (advanced)

Given the domain of *creative technology* we envision an advanced project *living & working tomorrow*, in close cooperation with *smart technology*.

conclusion(s)

We have sketched a proposal for the first year *creative technology* curriculum, based on an equal share of tracks and sub-disciplines, as a reference for discussing courses and topics in the first year. It must be emphasised, again, that the integrative courses/projects *creative applications* are essential, not only to train the individual students in applying their skills and knowledge, but equally important to promote a collective identity of *creative technology* students in collaborative projects.