

The intended learning outcomes of Creative Technology

Graduates of the Creative Technology program are problem-solvers, who

- can trace back (or help a client trace back) a possibly ill-posed initial question to the underlying challenge,
- can generate ideas and concepts,
- can identify opportunities for the exploitation of new technologies, and
- can develop ideas and concepts into key prototypes.

To this end, they acquire skills and knowledge in five areas:

- (1) Self-managing (as a designer) a process of creation;
- (2) Understanding and use of technology;
- (3) Designing for interaction, expression, impact and experience;
- (4) Societal and economic value; and
- (5) Academic and professional skills.

The attainment targets in area (1) Self-managing a process of creation, are:

1. Graduates understand autonomous design, and have the skills and knowledge to act as an autonomous designer, meaning that they can identify and choose projects, that they can explain and justify ideas in context, and that they have developed personality and a personal style
2. Graduates understand and are skilled in creative thinking and creative acting, meaning that they know and can apply creative thinking techniques, divergent and convergent thinking, and tinkering.
3. Graduates understand and have the knowledge to employ multidisciplinary design methods, meaning that they understand and can apply phasing in the systematic design process as an alternation of divergence and convergence, that they understand and can apply demand driven and explorative design; that they know how and can document and report, that they know how and can incorporate the user in the design process, and that they know how and can evaluate design options and take design decisions

The attainment target in the area (2) Understanding and use of technology are:

4. Graduates understand and can use technology in the following domains:
 - a. software, algorithms, physical interaction
 - b. web technology, web services and data management,
 - c. behaviour of physical systems, (especially in the electrical domain)
 - d. sensing, implicit interaction
 - e. telecommunication.
5. Graduates can rely on a basic knowledge of physics, mathematics and engineering in support of their understanding and use of technology.

The attainment targets in the area (3) Designing for interaction, expression, impact and experience are:

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6. The graduates understand and can use expressive technology, meaning that they have knowledge and skills in expressive media, like stills and moving images, sound and 3d-modelling, and that they have knowledge and skills in storytelling, story worlds, and messaging.
7. The graduates have knowledge of and can investigate human technology relationship and human design relationship; they are familiar with arts and culture; they are aware of human factors, and of social patterns and societal structures;

The attainment targets in the area (4) Societal and economic value are:

8. The graduates have knowledge and skills to bring creative technology to the market, meaning that they are familiar with market analysis, with attracting capital and financing, and with intellectual property rights, and that they can write a business plan.
9. Graduates are aware of the roles of designers in society, and the standards (ethically and legally) for professional behavior.

The attainment targets in the area (5) Academic and professional skills are:

10. Graduates can communicate with experts and non-experts about all aspects of their field, this communication covers presentation, justification and documentation, and (to a limited extent) scientific debate; in this communication the graduate knows how to employ modern media.
11. Graduates are capable of logical reasoning; they are inquisitive and capable of posing proper questions; they are familiar with research methods, and (to a limited extent) can set up their own research; they can critically evaluate results obtained (by themselves and others); they are capable of critical reflection and can adapt their behavior on the basis of that reflection, and are aware of gaps in their own knowledge and skills; they are prepared to learn and capable of learning.