

### **educational method(s)**

The Creative Technology bachelor may be characterized as primarily an integrative curriculum. In comparison with the other curricula that are offered at EWI and CTW, the Creative Technology curriculum aims at attracting a wider range of students, that differ from students in the other curricula by possibly a non-technical profile and, more importantly, a high motivation to be creative with technology. To accommodate this type of students, consequently, a different approach to education is necessitated, in which there is sufficient tolerance for a wider range of talents and which offers projects that are sufficiently motivating for young students with creative aspirations.

In order to find a proper balance between academic skills and competences and creative opportunities, we offer three types of courses:

1. disciplinary courses – traditional approach, with regular courses and assignments
2. project-based work – lectures to support active exploration of topics by students
3. creative applications – challenges, to produce viable solutions for real world applications

Both disciplinary courses and project-based work are akin to traditional computer science and engineering courses. Creative applications differ from these, in an essential way, by offering creative challenges that surpasses mere problem-solving or even problem-finding, allowing students to take initiative and gain experience in self-organisation in projects with an intrinsic element of public exposure, offering a real challenge for their creative capabilities.

In addition to the regular courses and creative applications, we find it important to offer space for

- creative explorations – in art, science and technology

which allow for inspiration by and reflection on, among others, the role of mathematics in art, both from a historical perspective and in contemporary art and design.

Although the need to include creative training in academic curricula is widely recognized, see for example the IIP/CREATE report (Appendix ), it is not immediately obvious how to do that! In close cooperation with CTW (Industrial Design) we offer a mix of explicit attention for creative processes, such as brain-storming and out-of-the-box thinking, and a more implicit approach which comes down to providing adequate challenges and support for self-organisation, initiative and a relative degree of autonomy, together with inspirations from pioneers in art, media and design, among others in the creative explorations. Moreover, for the creative applications, we seek active involvement with regional institutes (such as the Creative Factory) and representatives of the (local) creative industry (directly and through our contacts with syntens), to ensure both challenging projects and public exposure. Creative applications and projects are explicitly meant to allow students to develop themselves according to personal motivation and interest, and to assume a role in the group that best fit their individual talent(s). However, to guarantee a sufficient degree of participation as well as individual (academic) qualification(s), additional mechanisms of supervision and control are necessary, among which group discussions and periodic peer-reviews, in which students assess the productivity, quality and creativity of other students contributions, as well as the responsibility taken in the overall group process. This approach ensures that students learn, apart from the necessary skills and competences, how to communicate and function in a group, thus gaining experience which is critically needed for a successful career in the creative industry, which is simultaneously competitive as well as highly dependent on collaboration and group dynamics.

To the extent that we allow for a high degree of autonomy and encourage individual creativity, one may speak of a change of paradigm in educational approach, in relation to the other engineering and computer science curricula. In this respect, our curriculum more closely resembles the approach taken for Industrial Design. Yet, in comparison, our approach differs in an essential way from the just-in-time learning adopted for Industrial Design, since we provide ample space for courses of a more disciplinary nature, that is courses in which the students gets familiar with the fundamentals of the technologies involved. In the creative applications, however, as well as in the bachelor projects, we encourage students to develop their individual talents, and, in cooperation with other students and possibly external experts, create applications in multi-disciplinary teams that merit public exposure!