

## Minor regulation Educational Technology

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# ED TECH

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### **Signature for approval**

Curriculum Owner

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## Minor content

Do you see opportunities for developing better technological solutions in education? Are you entrepreneurial enough to turn your own ideas into a prototype / proof of concept with the possibility to use this as a basis for a startup? Then Ed Tech is for you. The world of education, prototyping, validation and entrepreneurship will then be opened to you.

After taking the minor Educational Technology (EdTech), you will learn the challenges of the ever-changing world of technology-based learning, teaching and training. This is due to the practical, project-based approach to conceptualizing, building and deploying digital resources. You can think about the possibilities of technology in education, you are able to validate these ideas and bring them to a proof of concept. You know the problems of rolling out technology in education and can deal with it in an entrepreneurial way.

Schools rely heavily on the Internet and other forms of digital technologies to support teaching and learning. Mobile technologies and online courses have revolutionized the way information is delivered. Schools are still in dire need of new teachers who become technology thought leaders and role models for integrating meaningful 21st century technologies into the curriculum. Prospective graduates who are able to apply teaching and learning pedagogies to new technological developments will develop a competitive advantage in the labor market.

Nevertheless, we still observe a rather small amount of new educational technological solutions, developed with didactics or learning as the starting point, in favour of the technique.

This minor focuses on real life cases, guest lectures, inspiring working methods and, above all, doing a lot. The minor was set up in collaboration with our Partners in Innovation and relevant players in the field, as well as a number of Fontys services and institutes. In addition, it is strongly intertwined with Surf's national acceleration agenda ([link](#)) where the innovative use of ICT to improve Dutch education is the objective. The curriculum therefore fits in well with the great demand from practice.

Topics covered include for example:

- Instructional Design
- Design thinking
- Prototyping
- Concept validation
- Technology
- Business case studies
- User experience / Usability
- Possibilities of technology in education Product development

In the minor EdTech, students from various backgrounds work together and learn from each other. This is mainly because they come from different didactic and pedagogical backgrounds. That gives a rich insight into the field first hand. As a student you work with practical examples from startups and other major players from the EdTech world and you test your own ideas for educational technologies, thereby validating the feasibility. We also expect you to look outside the walls of the program at events or congresses. (Co-organized from the acceleration agenda) Outside also comes in; guest speakers are the rule rather than the exception.

In the minor you are invited to develop your entrepreneurial skills, take initiatives and bring about changes that create value for people and society. You learn to bridge the gap between education and ICT; multidisciplinary collaboration by thinking interdisciplinary. You will work independently and practically, where the knowledge is gained and deployed from multiple disciplines. Startup validation and the possibilities of the EdTech acceleration agenda living labs are used to test the ideas.

A small competency set is used within the Ed-Tech minor. This is derived from the HBO-i competence set for ICT courses. This HBO-i set can be found [here](#). This model is based on the software development cycle. This is almost the same as the product development cycle. Hence an excellent match for the minor where new Ed-Tech products (often ICT) will be developed.

The cycle has 5 additional competences, Analyzing, Advising, Designing, Realizing and Managing. These can be used cyclically.

In addition to these 5 core competencies, we also look at professional development. This is summarized in 4 competences, as FHICT also uses them.

## Competencies

Analyzing	<b>Analyzing an (educational) technology application</b> within a <b>certain pedagogical-didactic climate</b> and describing its <b>impact</b> .
	Determining <b>one or more possible solutions</b> within the framework of the impact analysis
	<p><b>Explanation:</b> in the context of educational technology, map the climate and identify problems there and on this basis come up with possible solutions.</p> <p>Make analysis: in a structured, research-based way you come to critical findings with regard to (Educational) technology application: <u>by this we mean any technological application that is used for educational purposes / to support learning</u></p> <p>Pedagogical-didactic climate: this refers to the broad learning environment, which is attuned to the learning on the one hand and the learning objectives on the other, taking into account the educational vision.</p> <p>Determining impact: this aims to identify intended and unintended learning effects</p>
Advising	Based on the analysis outcomes, several motivated concepts for a solution are reached
	Make a selection based on criteria of the various concepts and give advice on this.
	Provide advice on further development and market position of the conceptual product.
	<b>Explanation:</b> Based on the analysis, can arrive at different concepts that offer a solution. A motivated choice can be made from these concepts.
Designing	Based on a motivated concept description, a design of a prototype is made.
	Can validate this design by performing usability test
	<b>Explanation:</b> Can translate a concept into a design and perform user tests on it to validate the design.
Realizing	Can realize the designed concept down to a testable prototype level. Depending on the background of the student (IT), this may be further implemented.

	<b>Explanation:</b> Coming to a testable prototype provides feasibility insight into the final product. The described competence is a minimum. The quality may differ depending on the student's starting skills.
<b>Managing</b>	Documents all steps via an accepted methodology and can thus make the product transferable.
	<b>Explanation:</b> Necessary for making the Proof of Concept transferable and expandable.

#### Professional development.

<b>Future-oriented organization</b>	The student can explore the organizational context of ICT assignments; make business, sustainable and ethical considerations and manage all aspects of the execution of the assignment.
	<ul style="list-style-type: none"> <li>• You analyze the environment and stakeholders of the assignment.</li> <li>• You substantiate the added value of a solution.</li> <li>• You know ethical standards and involve social ethical themes in the judgment.</li> <li>• You independently identify sub-tasks, plan and monitor the time, money, quality and ethics of the execution of the work.</li> <li>• You recognize opportunities and risks and ensure future-oriented implementation, commissioning and commissioning.</li> </ul>
<b>Investigative problem solving</b>	The student can critically view ICT assignments from different perspectives, identify problems, find an effective approach and come to appropriate solutions.
	<ul style="list-style-type: none"> <li>• You identify unstructured practical problems.</li> <li>• You work independently and structured towards an evidence-based solution.</li> <li>• You ask research and partial questions from different perspectives.</li> </ul>
<b>Personal leadership</b>	The student shows that he is entrepreneurial with regard to ICT assignments and personal development, paying attention to his own learning ability and keeping in mind what kind of ICT professional and / or what type of functions one aspires to.
	<ul style="list-style-type: none"> <li>• You are actively attentive to possibilities and opportunities.</li> <li>• You are adaptive and resilient in applying and understanding new technologies.</li> <li>• You motivate your team in addition to yourself.</li> <li>• You consciously look at what else you want to learn.</li> <li>• You reflect on and evaluate your own actions.</li> <li>• You investigate what type of professional you are and how you distinguish yourself from others.</li> </ul>

<b>Interacting purposefully</b>	Determining which partners play a role in the ICT assignment, working constructively with them and communicating appropriately aimed at the desired impact.
	<ul style="list-style-type: none"> <li>• You anticipate different types of cooperation partners.</li> <li>• You work together in interdisciplinary teams.</li> <li>• You show how you take cultural differences into account.</li> </ul>

### Summary for diploma supplement

A student who has successfully completed EdTech can do the following: Within the framework of a certain pedagogical didactic climate, come up with proof of concepts or prototypes for new applications with technology to support / improve education. These concepts / prototypes are substantiated, validated and delivered in a testable form. As such, this forms the basis for a possible start-up in which to graduate.

Overview educational activities minor (see article 12 general part of the TER):

- Training and knowledge sessions in areas such as Instructional Design, Design thinking, Prototyping, Concept validation, Technology, Business Case, User experience / Usability, Learning Analytics, etc.
- Lectures and guest lectures by professionals from the field.
- Company visits.
- External events and webinars.
- Project-based, case-driven working according to the model of Open learning (FHICT)
- Add coaching to professional development and the yield from this to the portfolio (baseline measurement, development plan, activity plan and measurement of progression).
- Tutoring with the activities associated with projects and self-study courses.

The working methods used within the minor will challenge the student to go beyond his own current frame of mind. The student will come into contact in various ways with national and international EdTech trends, various useful information sources and leading experts in the field of Educational Technology. In practical assignments and workshops, the student gets to work with the tools and applying the learned theory. In addition, field trips (to inspiring conferences and companies that work with EdTech) are organized outside the Fontys location.

### Registration for educational activities minor

Not applicable.

### Assessment and final assessment (Articles 18 and 22 general part of the TER)

During the minor you will work on professional products with which you can demonstrate your competence growth and the achievement of the competences. You collect these products in your portfolio and have them assessed by the teachers and coach in the meantime. The assessment is a continuous process of feedback and guidance, which provides insight into the status of your competency development and which follow-up steps you must take to demonstrate the competences successfully. Process feedback is recorded in Feedpulse and the task-oriented feedback and assessment are registered with the professional products and associated rubrics. In this way, the concept of 'assessment as learning' is fleshed out, whereby portfolio construction and validation of professional products take place gradually (reference to Dochy). At the end of the semester, a final interview takes place in the form of a portfolio inspection, in which it is determined whether the evidence is authentic and whether the student has successfully demonstrated all the competences on the basis of this. At least two assessors and you as a student are present.



At the portfolio inspection it is established that the validation of the evidence provided (= authentic professional products) has proceeded correctly during the system of permanent evaluation, after which the formal recording of the integral, summative assessment is made.

In accordance with the assessment policy, proofs consist of:

- formative feedback from the teachers, given in writing;
- obtained certificates and completed self-study courses;
- professional products validated by teachers or other experts;
- formative feedback from the lecturer, given orally and then documented by the student and validated by the lecturer at the initiative of the student.

The portfolio inspection will only take place if a portfolio is delivered on time and in full, in accordance with the deadlines associated with that semester.

The portfolio inspection is of inspection type A: tests, in which the student is (should be) present when determining the assessment by the assessor (s).

### **Determine assessment**

The summative assessment is expressed at the end of the portfolio review in Unsatisfactory / Satisfactory / Good / Outstanding (USGO scale). Unsatisfactory means that the minor has not been passed and results in a restart. Satisfactory / Good / Outstanding corresponds to Achieved.

### **Resit and / or repair**

The repair of the minor is offered once in the same semester, after the first chance, and consists of the possibility to supplement the portfolio at designated points, based on development-oriented feedback. There is only room for a repair on the formfactor of the portfolio, not on the content.

### **Assessment model**

During the semester, there are several feedback moments in which the student's portfolio is evaluated. The purpose of this is to provide the student with insight into his progress (assessment as learning).

### **Minor completion (see article 19, paragraph 3, general part TER)**

The student has successfully completed the minor when all competences have been demonstrated in full. Compensation between competencies is not possible.

### **Board of Examination (article 38 general TER section)**

The Examination Board determines whether the student has passed the minor and ensures that the student receives a certificate for the obtained minor. The Examination Board can be contacted by email for agreements regarding extra facilities and the assessment in the minor.

### **Validity**

This information applies to the academic year 2020-2021.

*Explanation: interim changes to a minor are possible, provided they are clearly and timely communicated with students and are also included in the minor scheme.*

### **Entry requirements minor**

In order to participate in the minor, the student must have passed the propaedeutic phase or have permission from the Examination Board of his study program to take the minor.

### **Not accessible to**

Not applicable.

**No requirements are imposed on students for the participation and completion of the minor, other than those included in the minor scheme worked out here.**

**Literature**

Various e-books, articles on the internet and intranet - Free