**Building Virtual Worlds**

**Basic information of the minor**

**Code:** ARTS3098  
**Extent:** 15 to 25 ECTS  
**Language:** English  
**Organizing department:** Media  
**Teachers in charge:** Lily Diaz-Kommonen, Sebastian J. Schlecht  
**Administrative contact:** Meri Karjalainen  
**Target group:** BA, MA, and DA are welcome.  
**Application process:** Application in Spring.  
**Application instructions for Aalto University students**  
Students of other Finnish universities apply for the minor during the JOO application period in the [JOOPAS system](https://joopas.aalto.fi).  
**Needed attachments:** Needed attachments are a transcript of records and a motivation letter. In the letter the applicant describes their background and experience relating to the minor subject applied for as well as indicates their learning objectives. We strongly recommend that the applicants provide links to videos and/or other documentation about their past games, software, art, design etc.  
**Selection criteria:** 1) educational background relating to the minor subject, 2) working experience or other experience relating to the minor subject and 3) feasible learning goals relating to the minor subject.  
**Quotas and restrictions:** 10 students in the first year (2020 intake). Can increase up to 20 in future years.  
**Prerequisites:** Please see ‘application procedure’ and ‘quotas and restrictions’ above.

**Content and structure of the minor**

**Learning outcomes**

The learning outcomes of the minor are

- To provide artistic, design, and technical skills needed for creating synthetic experiences in the form of worlds that can be used for various purposes including art installations, film, and, game design.  
- To provide learning experiences that promote discussion and debate about the application of augmented and virtual reality in the everyday life of humans.  

In recent years, several technical breakthroughs have facilitated a new wave in virtual worlds. For the first time, VR/AR devices have entered the general consumer market, and a wide variety of VR applications are being developed. While commercial interests actively drive much of the current developments, this medium also provides new and exciting opportunities for art and design. As such, VR/AR’s impact is widespread and can be experienced as: virtual workplaces, virtual tourism, medical applications, as well as new forms of storytelling and documentation. Currently there is no extensive course offering dealing with technical and design aspects of virtual reality in Aalto ARTS. Thus, the minor in **Building virtual worlds** is a timely and valuable addition to the curriculum.

The courses in the **Building virtual worlds** minor should be ideally available to all levels including bachelor, master and doctoral level. Participation should be discussed with the studies supervisor.

**Structure of the minor**

The **Building virtual worlds** minor consists of four compulsory courses and additional elective courses (see list included below.) The site of instruction will be Aalto Studios, Otakaari 7. The minor will establish a laboratory for creative artistic and scientific practices. Student intake: 10 in the first year (2020). Possible extension to 20 in the second year.
The compulsory courses are

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>UWAS-C0056</td>
<td>Designing and Creating Virtual Worlds</td>
<td>5</td>
</tr>
<tr>
<td>DOM-E5161</td>
<td>Introduction to Virtual Reality</td>
<td>3</td>
</tr>
<tr>
<td>DOM-E5162</td>
<td>Coding Virtual Worlds</td>
<td>3</td>
</tr>
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The remaining credits can be chosen from the following list:

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ELEC-E5690</td>
<td>Immersive Sound</td>
<td>3-5</td>
</tr>
<tr>
<td>DOM-E5078</td>
<td>Game Audio Workshop</td>
<td>2-4</td>
</tr>
<tr>
<td>CS-C3120</td>
<td>Human-Computer Interaction</td>
<td>5</td>
</tr>
<tr>
<td>DOM-E5163</td>
<td>Independent Study in VR</td>
<td>2-10</td>
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