Basic information of the minor

**Code:** ARTS3097  
**Extent:** 15-25 ECTS  
**Language:** English  
**Level:** Bachelor, master and doctoral  
**Organizing department:** Taiteen laitos / ARTS ja Matematiikan ja systeemianalyysin laitos / SCI  
**Teacher in charge:** professor Martti Raevaara  
**Administrative contact:**  
**Target group:** All Aalto students  
**Application process:** No separate application procedure  
**Quotas and restrictions:** No quotas or restrictions  
**Prerequisites:** No prerequisites

Content and structure of the minor

The Aalto Math and Arts Minor is designed for students from all schools of Aalto in all levels of education. This systematic approach to engage mathematics and arts is open to students from the other universities in Finland as well. Especially art educators and students from teacher education are highly encouraged to take these courses. School teachers are also welcome to update their skills and find new concrete multidisciplinary ideas for their daily work. Courses can be taken independently, but either (or both) of the 5 ECTS courses below are recommended to be finished before MS-E1000. It is also possible to complete additional independent studies if needed. Contact Kirsi Peltonen in case you are interested in them. Learning outcomes:  
Students will learn to find connections between mathematics and art and architecture. Real mathematics will be revealed through patterns, symmetries, structures, shapes and beauty in such a way that will enable the student to view our environment from a new perspective. By the end of the course, the students will be able to distinguish aspects from their own fields which can be presented, considered and developed using the language of modern mathematics.

**Courses and timing:**

2020 Fall:  
MS-C1001 Shapes in Action, 5 ECTS – period I, every other year  
UWAS-C0014 Spatial Structures, 5 ECTS – period II  

2021 Spring:  
MS-E1000 Crystal Flowers in Halls of Mirrors: Mathematics meets Art and Architecture, 10-15 ECTS - periods III-V, every other year  

Fall 2021:  
UWAS-C0014 Spatial Structures, 5 ECTS - periods I & II (The UWAS course can only be taken once and has two alternative implementations, one in fall 2020 and one in fall 2021)