Universität für angewandte Kunst Wien
University of Applied Arts Vienna

Art & Science

Curriculum

Master programme
Duration: 4 Semesters
Programme Number: 066776

This is the English translation of the original German version. Only the latter is legally binding.

Approved by the Senate of the University of Applied Arts Vienna
on 15 April 2010.
last modified on 30 March 2015.

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1. Point of departure and prospects

In the last few years, a renewed interest in collaborations and convergences between science and art can be seen, and it appears to be more mutual than ever. Artists' heightened preoccupation with the sciences in the 1920s and 30s is well known; this significantly affected the emergence of the modern in architecture, design, and visual art. In the 1960s, a second wave had causal influence on the development of electronic music, video art, and interactive art.

Science's growing interest of late in artistic production processes and methods has numerous reasons. On the one hand, new findings in physics (experimental quantum physics), biosciences (genetics in particular), and brain research have put the dogma of strict deductive analytical methods of research partially into question and reveal definite parallels between scientific and artistic developmental processes. On the other hand, it is becoming clear in precisely these most innovative scientific branches that images are often a necessary requirement for the advancement of scientific research strategies. Visualisation is becoming the basis for further work on new theoretical levels.

Conversely, art has always seized new technologies in order to make use of them as new media for artistic work: from the development of diverse printing techniques, to metal and plastic technologies, film and photography, and ultimately the "new media" of the information technology revolution. Imaging techniques still today titled "new media", in the form of photography, video, and digital computer technologies, are in the meanwhile decades-old technologies, which have opened up new possibilities for art. Current and emerging technological procedures are establishing new dimensions for scientific research in "invisible" realms of micro- and nanoworlds. Biotechnology, imaging techniques for exploring micro- and nanostructures, as well as the connection of temporal and spatial dimensions represent still widely unused media potentials for art. It seems that it is not without reason that art – which Walter Benjamin once called the governor of utopia – threatens to lose to science ever more power to affect the definition of progress. The fact that biomechanical and genetic engineering procedures could be the next generation of artistically applied "media" can be evaluated in different ways. Hence a comprehensive discussion on the potential artistic and societal impacts of these future media in a university context is important and necessary.

Especially for an art university like the Angewandte, whose founding mission advocates social development stimulated by art – fostered not least through the connection between contemporary art and the latest technology – it is particularly appropriate to, once again, be the first art institution to tread new paths. The Wiener Werkstätte, the development of Kineticism in the fine arts, the leading role in the development of Austrian video art, digital art, and net art, as well as the renewal in architecture that was only possible through the application of the latest technology – these are all aspects of the University of Applied Arts' history. And through the "Art & Science" master programme and its inherently fundamental connection between artistic-scientific research, teaching, and practice, this history will continue to be written.

The result is the interlinking of science and art on a content and organisational level, beginning with the focus on new visualisation strategies in research, teaching, and the development of art. For the content, this implies the appropriation of new visualisation technologies as artistic media and their application in artistic works – thus for the art market, for the communication of art and culture (teaching, museums, exhibitions), and for scientific research. Organisationally, this means the launch of a new inter- and transdisciplinary master degree programme in "Art & Science" for students with an artistic and/or scientific background.

2. Qualification profile

a) Positioning

The objective of the "Art & Science" master degree programme is to investigate the relationships between different artistic and scientific representational cultures and their respective cognitive and research methods. An inter- and transdisciplinary approach and project-oriented education should stimulate interaction between model and theory construction, and the application of methods, in particular, in the arts and sciences.

The central element of the master programme is a project orientation that takes account for the fact that in a "scientificised" world many everyday topics in society are permeated by scientific knowledge, which can lead to controversial discussions. In part, these discussions link complex fields of knowledge and their respective specialised knowledge and represent different contributions to our society's development. Here is a point of convergence for the – quite often different – questions that art and science pose and a creative crossroads emerges for finding or rejecting answers.

This point of view involves the investigation (and the corresponding in-depth study) of social and political processes, the relation, application, and development of artistic and scientific positions, methods, media, and organisations. Thus, it implies researching an oft-controversial societal thematic space, where the disciplinary, scientific-artistic ivory tower is infiltrated, where students locate and explore – and possibly generate themselves – more or less conspicuous socio-technical ruptures in our society. Prerequisite is a thirst for knowledge that leads to a representation, a creative restructuring of the respective themes, in which the respective application or interweaving of certain artistic or scientific methods or media represents the result and not the departure point of the research.

b) Teaching

The central artistic subject "Art & Science Interdisciplinary Project Work" serves as a hub for the individual orientations within the programme and provides space to develop a critical position and the corresponding argumentations. The objective is to facilitate and professionally supervise transdisciplinary research with reflection on different methods. The themes are derived from sociopolitical issues and selected on the basis of potential collaborations with institutions. Employing the range of experiences gained during collaborations with institutions and experts, the projects explore networking potentials between art and science contexts.

With their prior scientific/artistic knowledge and the creative ability to develop and apply visualisation and representational strategies procured in the "Art & Science" master degree programme, graduates will be able to provide conceptual support and facilitate either scientific or artistic research and developmental processes. Their professional paths may lead to either scientific research laboratories of universities, non-university research institutes, and research companies, independent artistic activity, or collaborations with ateliers of visual artists, media artists, designers, or architects.

3. Scope, duration, and structure of the programme

The programme consists of a workload of 120 ECTS credits and lasts four semesters.

The programme is taught in English. However, for courses in the areas of "Praxis and Theory" and "Free Electives" this depends on their availability in English.

The structure of the predetermined curriculum is such that certain courses may be selected to supplement the project work and the accompanying transdisciplinary reflection. Through project work, the methods applied and the artistic-scientific procedures are to be expanded upon and to be fleshed out to form the base for the master thesis due in the fourth semester.

The individual focus of the programme and the balance and ratio between art and science are co-determined by the students through their choice of courses from "Praxis and Theory" and "Free Electives" and, in particular, by the topic of their master thesis.

The final assessment of the programme is the product of the assessments in the following modules:
- Interdisciplinary Practice / Art & Science Project Work
- Art & Science: Methods of Transdisciplinary Research and Applied Representation Techniques
- Master Thesis

Course breakdown per subject:

Interdisciplinary Practice/Art & Science Project Work

Course	Type	SH	ECTS
Art & Science Interdisciplinary Project Work I	PA	3	12
Art & Science Interdisciplinary Project Work II	PA	3	16
Art & Science Interdisciplinary Project Work III	PA	3	20

Art & Science: Methods of Transdisciplinary Research and Applied Representation Techniques

Course	Type	SH	ECTS
Experimental Studies I-IV	SE	8	16
Methods and Practices of Experimental Cultures	VO	2	2
Applied Visualisation Cultures	VO	2	2
Transdisciplinarity and Representation I/II	VU	5	9
Art & Science Interdisciplinary Theory Seminar I/II	SE	2	6
Praxis and Theory			6
Free Electives			4

Master Thesis

Course	Type	SH	ECTS
Master Thesis			24
Master Thesis Tutorial	KO	2	2

SH = Semester Hours

4. Admission

The “Art & Science” master programme is an art study programme in accordance with § 54, para. 1, subpara. 3 of the Austrian Universities Act.

Prerequisites for admission are proof of artistic aptitude in the framework of the entrance examination pursuant to § 76 of the University Act 2002, and graduation with a domestic diploma or bachelor degree, or foreign equivalent, in the fields of visual arts, media arts, design, architecture, engineering, humanities, natural, cultural or social sciences.

5. Course of Study

1st Semester	Type	SH	ECTS
Art & Science Interdisciplinary Project Work I	PA	3	12
Experimental Studies I	SE	2	4
Methods and Practices of Experimental Cultures	VO	2	2
Transdisciplinarity and Representation I	VU	3	6
Praxis and Theory from the following areas depending on current course offers: Programming, Computer Graphics, Science Visualisation, Electron Microscopy, Media Arts, Photography, Painting, Printed Graphics, Drawing, Sculpture, Video, Sound, Material Technology (Wood, Metal, Textiles, Ceramics, Paper) Art History, Art Theory, Media Theory, Cultural Studies, Social Sciences, Philosophy, Gender Studies			6

2nd Semester	Type	SH	ECTS
Art & Science Interdisciplinary Project Work II	PA	3	16
Experimental Studies II	SE	2	4
Applied Visualisation Cultures	VO	2	2
Transdisciplinarity and Representation II	VU	2	4
Free Electives: Courses at universities (national and international) of free choice			4

3rd Semester	Type	SH	ECTS
Art & Science Interdisciplinary Project Work III	PA	3	20
Experimental Studies III	SE	2	4
Art & Science Interdisciplinary Theory Seminar	SE	2	6

4th Semester	Type	SH	ECTS
Master Thesis			24
Master Thesis Tutorial	KO	2	2
Experimental Studies IV	SE	2	4

(SH = Semester Hours)

6. Entrance regulations

6.1. Entrance examination

6.1.1. The entrance examination involves the assessment of exceptional artistic talent, and the ability to link this talent with scientific processes.

6.1.2. Registration for the entrance examination takes place upon submission of a portfolio of independently produced sample work from preliminary studies as well as a letter of motivation with an accompanying curriculum vitae.

The entrance examination consists of three phases:

- The first phase includes the assessment of the artistic and/or scientific sample work prepared by the candidate.
- The second phase consists of a written test on creative tasks in the fields of art and science.
- In the third phase, the candidate's aptitude for the programme is reviewed in a personal interview.

6.1.3. The entrance examination is only considered to be successfully completed when a positive assessment is granted in all three phases.

6.2. Art & Science Interdisciplinary Project Work

6.2.1. The central artistic subject of the study programme is dealt with in the context of "Art & Science Interdisciplinary Project Work".

6.2.2. Usually, project works are carried out by a single person. However, provided the project supervisors agree, project work may be executed by several students working together. In this case it must be ensured that the individual contribution of each student is recognisable and that the conceptual artistic-scientific parts contributed are of equal value.

6.2.3. During these project works, students will be supervised by a number of university teachers – from various disciplines – collectively (project supervisors).

6.2.4. The project supervisors are responsible for the assessment of the project work.

6.2.5. Upon application by the programme coordinators, the appointment of the project supervisors is the responsibility of the administrative body for study law pursuant to § 19, para. 2, subpara. 2 of the University Act 2002. University teachers from other universities can also be appointed as project supervisors upon their written consent.

6.3. Experimental Studies

6.3.1. "Experimental Studies" include formats for transdisciplinary networking and supervision, as well as supplementary, subject-related guest lectures. Grades will be issued by including the continuative formats for transdisciplinary networking on offer during the semester in question.

6.4. Programme coordinators

6.4.1. For the planning of the content and organisation of the programme and examination services, the rector must appoint an artistic and a scientific programme coordinator. They make decisions in mutual agreement. In the case of conflict, the administrative body for study law makes the decision pursuant to § 19, para. 2, subpara. 2 of the University Act.

6.4.2. The programme coordinators are appointed for an indefinite period of time. A dismissal is possible.

6.4.3. University professors of an artistic or a scientific subject can be appointed as programme coordinators.

6.4.4. Programme coordinators can also be supervisors of projects and master theses.

6.5. Master thesis

6.5.1. The programme is completed with the master thesis.

6.5.2. The master thesis consists of the development, the realisation with media technology and the theoretical foundation of a project of artistic research in an artistic-scientific field of application.

6.5.3. The master thesis is supervised by one or more university teachers with venia docendi in the framework of an accompanying tutorial. Upon application by the programme coordinators, the appointment of the supervisors takes place through the administrative body for study law pursuant to § 19, para. 2, subpara. 2 of the University Act. The students have a right of proposal.

6.5.4. Two students can conduct a master thesis together when it is authorised by the programme coordinator and in agreement with the supervisors, and when the contribution of each student is recognisable.

6.5.5. Following a public presentation of the results by the students, the master thesis is to be assessed by an examination commission comprised of three university teachers from the field. In any case, the supervisors are members of the examination commission.

6.6. Final Examination

6.6.1. The final examination consist of the subjects “Interdisciplinary Practice/Art & Science Project Work” and “Art & Science: Methods of Transdisciplinary Research and Applied Representation Techniques” as well as of the completion of the master thesis.

6.7. Academic degree

6.7.1. For the successful completion of the programme, proof of successful participation in all of the courses prescribed in the curriculum and the approval of the master thesis are required.

6.7.2. Upon successful completion of the programme, the student is awarded the academic degree “Master of Arts” (MA).

7. Entry into force

7.1. This curriculum entered into force on 1 October 2011.