# Module Descriptions for Multimedia Composition Master of Arts

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**Examinations:** a distinction is made between examinations and academic performance. Exams are administered by a committee. They can be repeated once and are usually held at the end of a module. Academic achievements are assessed by the lecturer. They can be completed in the course of a module, e.g., credits are awarded for papers, term papers, presentations and tests of various kinds. Their repeatability is not limited. Both examinations and academic performances are usually assessed as passed or failed. The examination results in the final modules are, however, assessed in a different manner.

#### 1 STUDY PLAN

| MODULE                                   | 1st    | Sem. | 2nd | Sem. | Exam | 3rd | Sem. | 4th | Sem. | Exam |
|--|--------|------|-----|------|------|-----|------|-----|------|------|
| Core Module                              | SWS    | Cr   | SWS | Cr   | _    | SWS | Cr   | SWS | Cr   | _    |
| Multimedia Composition (E/G)             | 1      | 3    | 1   | 3    |      | 1   | 3    | 1   | 3    |      |
| Composition (E)                          | 1      | 3    | 1   | 3    |      | 1   | 3    | 1   | 3    |      |
| Colloquium                               | 0.5    | 1    | 0.5 | 1    | S    | 0.5 | 1    | 0.5 | 1    | S    |
| Techniques of Multimedia Composition (S) | 4      | 5    | 4   | 5    |      | 4   | 5    | 4   | 5    |      |
| Electronic Performance Practice (E)      | 1      | 2    | 1   | 2    |      | 1   | 2    | 1   | 2    |      |
| Final Module                             |        |      |     |      |      | AB- | MMK  |     |      | _    |
| Term Paper                               |        |      |     |      |      |     | 8    |     |      | Р    |
| Final Project                            |        |      |     |      |      |     | 5    |     | 15   |      |
| Academic Module                          | Wiss-1 | -MMK |     |      | -    |     |      |     |      |      |
| Seminar on selected topics (S)           | 2      | 4    | 2   | 4    | S    |     |      |     |      |      |
| Media Theory (S)                         | 2      | 4    |     |      | S    |     |      |     |      |      |
| Science of Music (V)                     |        |      | 2   | 4    | s    |     |      |     |      |      |
| Technical Module                         | Tec-W1 | -MMK |     |      |      |     |      | _   |      |      |
| Elective subject <sup>1</sup>            | 2      | 4    | 2   | 4    |      | 2   | 4    | s   |      |      |
| Theoretical Module                       | The-W1 | -MMK |     |      | _    |     |      |     |      |      |
| Elective subject <sup>2</sup>            | 2      | 4    | 2   | 4    | s    |     |      |     |      |      |
| Sum of Credits                           |        | 30   |     | 30   |      |     | 31   |     | 29   | 120  |

E = Individual lesson; S = Seminar; V = Lecture

SWS = Semester periods per week; Cr. = Credits according to ECTS (1 Cr. = 30 h)

P = Examination before committee; S = defined academic performance; for details see module description.

#### 2 CORE MODULE MULTIMEDIA COMPOSITION

#### 2.1 Core Module 1 Multimedia Composition

| Module name and code      | Core Module 1 Multimedia Composition Master  | K-1-MmK            |          |     |         |
|---------------------------|--|--------------------|----------|-----|---------|
| ECTS Points               | 28   |                    |          |     |         |
| Study Semesters           | 1st & 2nd semester                           |                    |          |     |         |
| Length and Type of Module | 2 semesters / compulsory                     |                    |          |     |         |
| Frequency of Offer        | every year                                   | Attendance<br>Time | Homework | SWS | Credits |
| Courses (Type)            | 1) Main subject Multimedia Composition (E/G) | 35                 | 145      | 1   | 6       |
|                           | 2) Composition (E)                           | 35                 | 145      | 1   | 6       |
|                           | 3) Techniques of Multimedia Composition (G)  | 140                | 160      | 4   | 10      |
|                           | 4) Electronic Performance Practice (E)       | 35                 | 85       | 1   | 4       |
|                           | 5) Colloquium (G)                            | 17.5               | 12.5     | 0.5 | 2       |

| Content                      | <ol> <li>Discussion of student works, discussion of aesthetics of multimedia composition, project meetings, concert preparations.</li> <li>Introduction and in-depth study of aspects of contemporary music notation.</li> <li>Algorithmic composition (concepts, history, works, software). Software: Max/MSP, OpenMusic.</li> <li>History and practice of live electronic performance.</li> <li>Additional questions in the field of composition, including approaches such as improvisation or cognitive science.</li> </ol> |
|------------------------------|---|
| Qualification Goals          | <ul> <li>Development of conceptual, aesthetic and technical skills.</li> <li>Students should be able to plan and adequately notate musical processes.</li> <li>Acquisition of technical skills for the creative handling of algorithmic composition.</li> <li>Consolidation of skills in handling hardware and software for live electronics.</li> <li>Acquisition of further knowledge in various areas of contemporary compositional thought.</li> </ul>  |
| Proof of Achievement         | Module examination for academic achievement:<br>1. Successful performances of the compositions worked on.<br>2. Submission of the compositions worked on.<br>At least 85% attendance.   |
| Participation Requirements   | Passed entrance examination, good knowledge of German and English. Skills in electronic music and multimedia as well as in research work.   |
| Co-ordinator                 | Prof. Dr. Georg Hajdu   |
| Recommended Basic Literature | by agreement with 3) Roads: Computer Music Tutorial; Xenakis: Formalized Musik; Barlow: Two Essays on Theory;<br>Barlow: A Journey to Parametron; Cope: Virtual Music; Rowe: Machine Musicianship; Winkler: Composing<br>Interactive Music: Techniques and Ideas Using Max.   |

#### 2.2 Core Module 2 Multimedia Composition

| Module name and code      | Core Module 2 Multimedia Composition Master  | K-2-MmK            |          |     |         |  |
|---------------------------|--|--------------------|----------|-----|---------|--|
| ECTS Points               | 28   |                    |          |     |         |  |
| Study Semesters           | 3rd & 4th semester   |                    |          |     |         |  |
| Length and Type of Module | 2 semesters / compulsory   |                    |          |     |         |  |
| Frequency of Offer        | every year   | Attendance<br>Time | Homework | SWS | Credits |  |
| Courses (Type)            | 1) Main subject Multimedia Composition (E/G)   | 35                 | 145      | 1   | 6       |  |
|                           | 2) Composition (E)   | 35                 | 145      | 1   | 6       |  |
|                           | 3) Techniques of Multimedia Composition (G)  | 140                | 160      | 4   | 10      |  |
|                           | 4) Electronic Performance Practice (E)   | 35                 | 85       | 1   | 4       |  |
|                           | 5) Colloquium (G)  | 17.5               | 12.5     | 0.5 | 2       |  |
| Content                   | <ol> <li>Discussion of student works, discussion of aesthetics of multimedia composition, project meetings, concert preparations.</li> <li>Introduction and in-depth study of aspects of contemporary music notation.</li> <li>Algorithmic composition (concepts, history, works, software). Software: Max/MSP, OpenMusic.</li> <li>History and practice of live electronic performances.</li> <li>Additional questions in the field of composition, including approaches such as improvisation or cognitive science.</li> </ol> |                    |          |     |         |  |
| Qualification Goals       | <ul> <li>Development of conceptual, aesthetic and technical skills.</li> <li>Students should be able to plan and adequately notate musical processes.</li> <li>Acquisition of technical skills for the creative handling of algorithmic composition.</li> <li>Consolidation of skills in handling hardware and software for live electronics.</li> <li>Acquisition of further knowledge in various areas of contemporary compositional thought.</li> </ul>   |                    |          |     |         |  |

| Proof of Achievement         | Module examination for academic achievement:<br>1. Successful performances of the compositions worked on.<br>2. Submission of the compositions worked on.<br>At least 85% attendance.   |
|------------------------------|---|
| Participation Requirements   | Passed entrance examination, good knowledge of German and English. Skills in electronic music and multimedia as well as in research work.   |
| Co-ordinator                 | Prof. Dr. Georg Hajdu   |
| Recommended Basic Literature | by agreement with 3) Roads: Computer Music Tutorial; Xenakis: Formalized Musik; Barlow: Two Essays on Theory;<br>Barlow: A Journey to Parametron; Cope: Virtual Music; Rowe: Machine Musicianship; Winkler: Composing<br>Interactive Music: Techniques and Ideas Using Max. |

#### 3 ACADEMIC MODULE

| Module name and code      | Academic 1 Multimedia Composition Master | Wis-1-MmK          |          |     |         |
|---------------------------|--|--------------------|----------|-----|---------|
| ECTS Points               | 8  |                    |          |     |         |
| Study Semesters           | 1st & 2nd semester                       |                    |          |     |         |
| Length and Type of Module | 1 semester / compulsory                  |                    |          |     |         |
| Frequency of Offer        | every year                               | Attendance<br>Time | Homework | SWS | Credits |
| Courses (Type)            | 1) Seminar on chosen topics (G)          | 70                 | 170      | 2   | 8       |
|                           | 2) Media theory (G)                      | 35                 | 85       | 2   | 4       |
|                           | 3) The Science of Music (V)              | 35                 | 85       | 2   | 4       |

| Content                      | <ol> <li>Seminar on various topics (ethnomusicology, microtonality, contemporary rhythm, history of new music).</li> <li>History and concepts of multi-, inter- and transmedial art.</li> <li>Concepts of psychoacoustics and musical cognitive psychology: loudness, consonance/dissonance, pitch, harmony, melody, timbre, keys and tuning systems, metrics/rhythm, Gestalt psychology, auditory scene analysis, neurology of hearing.</li> </ol> |
|------------------------------|---|
| Qualification Goals          | <ul> <li>Extension and deepening of knowledge in the field of new music.</li> <li>Knowledge of essential cornerstones of multi-, inter- and transmedial art.</li> <li>Knowledge of essential concepts of psychoacoustics and musical cognitive psychology.</li> </ul>   |
| Proof of Achievement         | <ol> <li>Achievement: lecture, term paper.</li> <li>Achievement: term paper.</li> <li>Achievement: written exam or term paper.</li> <li>At least 85% attendance; proof of attendance and examination per semester</li> </ol>  |
| Participation Requirements   | Passed entrance examination, good knowledge of German and English. Skills in electronic music and multimedia as well as in research work.   |
| Co-ordinator                 | Prof. Dr. Georg Hajdu   |
| Recommended Basic Literature | by agreement with 3) Roads: Computer Music Tutorial; Xenakis: Formalized Musik; Barlow: Two Essays on Theory;<br>Barlow: A Journey to Parametron; Cope: Virtual Music; Rowe: Machine Musicianship; Winkler: Composing<br>Interactive Music: Techniques and Ideas Using Max.   |

### 4 TECHNICAL ELECTIVE MODULE

| Madula name and and          | Tasknisel Elective Medule 4, 0 Multimedia Composition Master   |   |          |     |         |  |  |  |
|------------------------------|--|---|----------|-----|---------|--|--|--|
| Module name and code         | Technical Elective Module 1–3 Multimedia Composition Master  | TeW-1-Mmk; TeW-2-Mmk; TeW-3-Mmk   |          |     |         |  |  |  |
| ECTS Points                  | 12   |   |          |     |         |  |  |  |
| Study Semesters              | 1st & 2nd & 3rd semester   |   |          |     |         |  |  |  |
| Length and Type of Module    | 3 semesters / Elective   |   |          |     |         |  |  |  |
| Frequency of Offer           | every year (upon offer)  | Attendance<br>Time  | Homework | SWS | Credits |  |  |  |
| Courses (Type)               | elective subject (G)   | 105   | 255      | 6   | 12      |  |  |  |
| Content                      | Offers: recording, sound design, film music, interactive video (Jitter), Java, programming languages, web design, sensor technology as well as offers from other universities. |   |          |     |         |  |  |  |
| Qualification Goals          | - Extension and deepening of technical skills in the field of multimedia   | - Extension and deepening of technical skills in the field of multimedia. |          |     |         |  |  |  |
| Proof of Achievement         | academic achievement<br>not less than 85% attendance   |   |          |     |         |  |  |  |
| Participation Requirements   | Passed entrance examination, good knowledge of German and English. Skills in electronic music and multimedia as well as in research work.                                      |   |          |     |         |  |  |  |
| Co-ordinator                 | Prof. Dr. Georg Hajdu  |   |          |     |         |  |  |  |
| Recommended Basic Literature | by agreement   |   |          |     |         |  |  |  |

### 5 THEORETICAL ELECTIVE MODULE

| Module name and code         | Theoretical Elective Module 1+2 Multimedia Composition Master   | ThW-1-MmK; ThW-2-MmK  |               |          |         |  |  |  |
|------------------------------|---|---|---------------|----------|---------|--|--|--|
| ECTS Points                  | 8   |   |               |          |         |  |  |  |
| Study Semesters              | 1st & 2nd semester  |   |               |          |         |  |  |  |
| Length and Type of Module    | 2 semesters / Elective  |   |               |          |         |  |  |  |
| Frequency of Offer           | every year (upon offer)   | Attendance<br>Time  | Homework      | SWS      | Credits |  |  |  |
| Courses (Type)               | 1) elective subject (G)   | 70  | 170           | 4        | 8       |  |  |  |
| Content                      | 1) Offers from: 20th-/21st-century musicology, music theory (including jazz), lectures on new music, as well as offers from other universities. |   |               |          |         |  |  |  |
| Qualification Goals          | - Extension and deepening of theoretical knowledge in the field of mu education.  | ltimedia/conten   | nporary music | and/or m | nusic   |  |  |  |
| Proof of Achievement         | 1) Achievement: Project work<br>At least 85 % attendance; proof of attestation of attendance and exar   | 1) Achievement: Project work<br>At least 85 % attendance; proof of attestation of attendance and examination per semester |               |          |         |  |  |  |
| Participation Requirements   | Passed entrance examination, good knowledge of German and English. Skills in electronic music and multimedia as well as in research work.       |   |               |          |         |  |  |  |
| Co-ordinator                 | Prof. Dr. Georg Hajdu   |   |               |          |         |  |  |  |
| Recommended Basic Literature | by agreement  |   |               |          |         |  |  |  |

#### 6 FINAL MODULE

| Module name and code         | Final Module Multimedia Composition Master   | AB-MmK             |          |          |         |  |  |
|------------------------------|--|--------------------|----------|----------|---------|--|--|
| ECTS Points                  | 28   |                    |          |          |         |  |  |
| Study Semesters              | 3rd & 4th semester   |                    |          |          |         |  |  |
| Length and Type of Module    | 1 semester / compulsory  |                    |          |          |         |  |  |
| Frequency of Offer           | every year   | Attendance<br>Time | Homework | SWS      | Credits |  |  |
| Courses (Type)               | 1) Term paper  | -                  | 240      | -        | 8       |  |  |
|                              | 2) Final project   | -                  | 600      | -        | 20      |  |  |
| Content                      | <ol> <li>Writing a term paper in the field of multimedia composition.</li> <li>Final project in the field of multimedia composition including all relevant elements: video, audio, interactivity.</li> </ol>       |                    |          |          |         |  |  |
| Qualification Goals          | <ul> <li>The student should independently work on a relevant topic and pres</li> <li>The student should use the final project to show that the contents of<br/>artistically implemented.</li> </ul>                |                    |          | ered and |         |  |  |
| Proof of Achievement         | <ol> <li>Term paper as hypertext (HTML or Flash).</li> <li>Concert, installation or software/hardware presentation.</li> <li>At least 85 % attendance; proof of attendance and examination per semester</li> </ol> |                    |          |          |         |  |  |
| Participation Requirements   | Passed module examinations of the first year.  |                    |          |          |         |  |  |
| Co-ordinator                 | Prof. Dr. Georg Hajdu  |                    |          |          |         |  |  |
| Recommended Basic Literature | by agreement   |                    |          |          |         |  |  |