

Thesis and Degree Requirements

Program in Media Arts and Sciences
Massachusetts Institute of Technology

1. GUIDELINES FOR ALL GRADUATE STUDENTS

1.1 Overview

The Program in Media Arts and Sciences (MAS) offers Master's (SM) degrees and Doctoral (PhD) degrees. All new MAS graduate students begin in the Master's program. Students wishing to enter the Doctoral program must demonstrate exemplary progress in both research and coursework, and gain approval from a departmental review.

Each graduate student is assigned a Faculty Advisor upon admission into the MAS program. The Faculty Advisor is responsible for supervising the student's progress through the MAS academic program and the student's research contributions as a Research Assistant.

The MAS Committee (MASCOM) is a faculty committee that oversees the graduate-student program in MAS. As a student moves through the MAS program, MASCOM approves the student's plan of study, Master's thesis proposal, General Exam proposal, and Doctoral Dissertation proposal. The committee reviews each student's progress at least once a year – or more frequently if the record or the student's advisor suggests.

1.2 Satisfactory Progress

Students are expected to maintain a cumulative grade-point average of 4.0 or greater (out of 5.0), and to complete, in a timely fashion, all requirements of the graduate program.

Term-by-term renewal as a Research Assistant will be considered on an individual basis by each student's faculty advisor and the Media Lab Director. Renewal is contingent upon satisfactory academic and research performance, and availability of funding.

If MASCOM determines that a student is not making satisfactory academic progress, it will first ask the student's Faculty Advisor to inform the student. If the problems continue, the Graduate Officer will write to the student describing the problem, and offer the student an opportunity to meet with the Graduate Officer and/or Academic Head. If progress does not improve, MASCOM may recommend that the Institute deny further registration to the student.

Any incomplete grades accumulated during graduate study must be resolved before degrees will be awarded.

1.3 Writing Requirement

All graduate students are required to pass the MIT Writing Program Skills Evaluation test upon entering the program. All proposals and theses are expected to meet high standards of technical written English.

2. MASTER OF SCIENCE

2.1 Degree Requirements

To receive a Master's degree, students must complete 60 academic course units (of which 42 units must be "H" level); 96 research units (typically 24 units per semester); plus a research thesis. Students must be in residence at least four semesters.

Students may select one of three designations for their degree: Master of Science in Media Arts and Sciences, Master of Science in Media Technology, or Master of Science without specification.

2.2 Degree Timeline

Within the first month of their first semester, each student (in consultation with their Faculty Advisor) is expected to develop a plan of study, which outlines the academic courses that the student plans to take during the Master's program. This plan of study is reviewed by MASCOM.

During their first two semesters in the Master's program, students normally take two academic courses per semester (21-27 units per semester), and undertake a program of research supervised by their Faculty Advisor, for which they receive 24 research units (MAS.910) per semester.

During their third regular semester, students normally register for two academic courses plus "Preparation for SM Thesis" (MAS.940) and 24 research units (MAS.910). During the semester, students are expected to submit (and receive MASCOM approval for) their Master's Thesis proposal, and to publicly present and discuss the proposal as part of Crit Day.

During their fourth regular semester, students typically focus all of their energy on their Master's Thesis, registering for 24 units of Graduate Thesis (MAS.ThG) and 24 research units (MAS.910).

2.3 Master's Thesis

The Master's Thesis is expected to be a significant piece of work that (1) demonstrates knowledge of the field of research and its literature, and (2) presents a validated contribution to the academic field of study defined by the thesis advisor. Often, the thesis is a component of a larger research effort in the advisor's group, in which case the specific contribution of the student should be made clear.

Students must assemble a Thesis Committee including a Thesis Advisor (normally their Faculty Advisor) plus two or more readers. The Thesis Committee must include at least two MAS faculty members (unless an exception is granted by MASCOM). Students must submit a Thesis Proposal, signed by all members of their Thesis Committee, at least one semester before they plan to submit the final thesis. The Thesis Proposal is reviewed by MASCOM (and must conform to the format specified by MASCOM). The student must make a public presentation of the Thesis Proposal as part of Crit Day.

The Master's Thesis will be considered as completed only after: (1) the Thesis Advisor has approved all documentation, demonstrations, and other materials related to the thesis, and submitted a letter grade for the thesis; (2) all members of the Thesis Committee have approved the final thesis document and signed two copies of the document; (3) the student has presented two signed copies and one electronic copy of the thesis and other necessary forms to the department headquarters; (4) the copies have been formally accepted by the Graduate Officer.

3. DOCTOR OF PHILOSOPHY (PhD)

3.1 Degree Requirements

MAS awards PhD degrees in the field of Media Arts and Sciences. To receive a PhD degree, students must participate in the MAS Doctoral Proseminar; complete a program of advanced study, including a General Exam; present their Dissertation Proposal at a public Dissertation Proposal Critique; complete a PhD Dissertation based on original research; defend the Dissertation in a public oral presentation.

Students are required to take whatever courses are needed (determined in consultation with their Faculty Advisor) to prepare for their General Exam and Dissertation research. Students are also required to participate in a program of research supervised by their Faculty Advisor throughout their time in the Doctoral program. Students must be in residence at least three regular academic semesters beyond the Master's degree, for a total of seven semesters after the Bachelor's degree.

3.2 Degree Timeline

The Doctoral program is expected to last at most four years. Students are required to participate in the MAS Doctoral Proseminar (MAS.921) in their first semester after being admitted as a PhD student. They are expected to complete the General Exam (see section 3.3) by the end of their third regular semester, and they are expected to complete all aspects of the Dissertation Proposal process (including the Dissertation Proposal Critique) by the end of their sixth regular semester.

3.3 General Exam

The MAS General Exam is designed to evaluate whether a student has sufficient knowledge and expertise in selected areas of research to begin work on a PhD Dissertation.

The General Exam covers three academic areas that the student will draw upon in Dissertation research. The three areas are chosen by the student in consultation with their Faculty Advisor (who will ordinarily chair the examination committee) and approved by MASCOM. One of the three areas will be examined in greater depth than the others, and will normally become the primary area of specialization of the student's Dissertation research. The other two areas include a “technical” area focusing on technological, mathematical, or other scientific underpinnings for the area of specialization; and a “contextual” area that places the intended Dissertation work in a larger social, psychological, philosophical, cultural, aesthetic, or historical perspective. The three areas should represent three distinct intellectual traditions. For example, if a student plans to work on a Dissertation involving the design of a new educational technology using audio signal-processing, the student might select “educational technologies” as a primary area of specialization, “audio signal processing” as the technical area, and “constructivist learning theory” as the contextual area.

The exam will be conducted by a three-person committee consisting of specialists in the three areas of the exam. The student will select the committee members, in consultation with their Faculty Advisor. Often, these examiners will also serve on the student's PhD Dissertation committee. The committee must include at least two MAS faculty members (unless an exception is granted by MASCOM). The student will submit a proposal to MASCOM including: signed approvals of the three committee members (including biographical information for members from outside MAS); a short description for each of the three areas; a plan of study (including a reading list) for each of the three areas.

The General Exam has separate oral and written components. In the oral component, the student is examined in person by all members of the examining committee (plus, in some case, a MASCOM representative). The oral exam typically lasts two to three hours. The session begins with a presentation by the student (at most 30 minutes), after which committee members ask questions to evaluate the student's knowledge, understanding, and ability to think through issues and problems in the three selected areas. Examiners can also ask questions from related fields. For example: If a student has selected “audio signal processing” as one of the three areas, the examiners might ask general questions from the surrounding field of “signal processing.” For the written component, the student must write a paper of publishable quality in the area of specialization, plus a 24-hour “take-home” examinations in each of the two related areas (with

questions posed by the committee members responsible for each of those areas). The oral component can take place either before or after the written components are completed, at the discretion of the committee chair.

The student must complete and pass all components of the General Exam within six months of the MASCOM approval of the proposal. The committee can issue a “conditional pass”, requiring the student to satisfy additional requirements (such as taking and passing a specific course). If the student fails any component, the student can re-take the component, but must do so within the following semester, and can re-take it only once.

3.4 PhD Dissertation Proposal and Critique

After passing the General Examination, students can begin preparation of their Dissertation Proposal (and register for MAS.950: "Preparation for PhD Thesis"). The proposal must be approved by MASCOM and presented at a public Critique at least one year before the student's completion of the Dissertation.

The proposal should present a plausible argument for a specific approach to a well-defined problem, with the intention of making an original and significant contribution to knowledge in the field. The proposal should include: motivation for the research, theoretical framework, related research, research plan, method of evaluating the work, expected results, and proposed timeline for the project. The proposal must conform to the format specified by MASCOM.

Research in Media Arts and Sciences often requires team collaboration and access to specialized resources. It is anticipated that a PhD Dissertation might, therefore, be based on research that is part of a much larger program. In such cases, the Dissertation Proposal and the Dissertation itself must clearly and unambiguously specify the contributions that are directly attributable to its author.

Students must assemble a Dissertation Committee including their Dissertation Advisor (normally their Faculty Advisor) plus two or more readers. The Dissertation Committee must include at least two MAS faculty members (unless an exception is granted by MASCOM). Often, this committee is the same as the examining committee for the General Exam.

The Dissertation Proposal must be approved by MASCOM, then presented at a public Proposal Critique, open to all members of the Media Lab community. A primary purpose of the Critique is to ensure that the student gets critical feedback from the community before proceeding further with Dissertation research.

The public defense will consist of:

- a 20-30 minute presentation by the student;
- open questions from the community;
- a private session with the full Dissertation Committee, plus another MAS faculty member selected by MASCOM (plus any other MAS faculty who wish to attend).

Based on feedback at these sessions, the Dissertation Committee can require additional changes to the Dissertation Proposal and resubmission to MASCOM. The Dissertation Proposal Critique must be completed at least one year before the completion of the Dissertation itself.

3.5 PhD Dissertation

A PhD Dissertation will be considered complete when the student has presented a public oral defense of the work and submitted a signed and approved Dissertation document. Before

scheduling the oral defense, the student must obtain written approval from all committee members, stating that the student is ready for the defense.

The student must inform MASCOM of the time and place of the oral defense at least one month before the event. All members of the Dissertation Committee must be present at the oral defense; students can petition MASCOM to allow for remote participation by committee members. The oral defense must be held at least two weeks before the final Dissertation document is submitted.

The process of submitting the final Dissertation document includes the following steps: (1) the Dissertation Advisor must approve all documentation, demonstrations, and other materials related to the Dissertation, and submit a letter grade for the Dissertation; (2) all members of the Dissertation Committee must approve the final Dissertation document and sign two copies of the document; (3) the student must present two signed copies and one electronic copy of the Dissertation and other necessary forms to the department headquarters; (4) the copies must be formally accepted by the Graduate Officer as having met all appropriate format and style requirements.

Last updated: August 2009