

IMGD Master of Science Degree

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Degree Description

The Master of Science in Interactive Media & Game Development (IMGD) is designed for those interested in the design of immersive, interactive environments. The intended audience includes college graduates looking for continued education in interactive media, game-industry professionals looking to assume leadership roles, professionals from other fields retooling for the game industry, and those seeking scholarship in interactive media. Graduate students in IMGD:

- Take core courses that provide a base of knowledge relevant to the design of interactive media
- Select courses that tailor the degree to suit interests and career goals
- Design, develop, and evaluate a substantial group project and/or undertake a thesis with novel scholarship as a capstone experience.

Graduates with an IMGD graduate degree will be qualified to pursue a diverse range of careers in the interactive media, computer games, or related industries, becoming producers, designers, academics, or project leaders in specific subfields such as technology, art, or design.

Degree Requirements

To complete the degree, IMGD M.S. students must complete 30 credits as follows:

- (3 credits) IMGD 5000 - Game Design Studio
- (12 credits) Core courses relevant to their interests (core courses are listed in this document)
- (6 credits) Two elective courses selected by the student and approved by the advisor.
- (9 credits) Masters project or thesis work

Each student is required to complete either a Master's thesis (a systematic approach to addressing an identified research question, typically done individually) or a Master's project (a substantial development effort that follows a production plan to implement a design vision, typically done in teams).

The IMGD program also offers a B.S./M.S. program for current IMGD undergraduate students. Students enrolled in this program may count up to 12 credit hours of specific undergraduate courses towards both their B.S. and M.S. degrees.

IMGD Core Courses

MS students will select four of the classes below.

IMGD 5100	Tangible & Embodied Interaction	3 credits
IMGD 5200	History & Future of Interactive Media	3 credits
IMGD 5300	Design of Interactive Experiences	3 credits
IMGD 5400	Production Management for Interactive Media	3 credits
IMGD 5500	Serious and Applied Games	3 credits
IMGD 5600	Multidisciplinary Research Methods in Computational Media	3 credits

Note that all of these courses are taught on alternate years, so you'll only have one chance to take them during the two-year degree. If a given course is not taught during the current academic year, it will almost always be taught the subsequent year with rare exceptions. Check with the IMGD graduate coordinator if you have concerns about a core course being offered in a particular year.

Electives

Six elective credits are chosen in consultation with your advisor. They can be taken from any department or program on campus, and students often take courses from Computer Science, Learning Sciences & Technologies, and Business. Other common choices include:

- 4000-level undergraduate courses (often in IMGD or Computer Science)
- Internship credit
- Independent study credits

Thesis / Project

All IMGD MS students are required to complete either a nine-credit thesis or a nine-credit project.

Defining the Difference between Project and Thesis

The graduate catalog gives us a distinction between the thesis and project, as follows:

...each student is required to complete either a Masters thesis (a systematic approach to addressing an identified research question, typically done individually) or a Masters project (a substantial development effort that follows a production plan to implement a design vision, typically done in teams) to complete the degree requirements (9 credit hours)

A thesis requires the student to answer a research question, following established research methods, under close supervision of a faculty advisor and with the support of a faculty committee. It incorporates a formal proposal milestone and a formal presentation milestone.

A project requires students to work on a design and development project related to IMGD. It may incorporate an innovative aspects of design and/or technology, or demonstrate the mastery of advanced topics in IMGD. Milestones for this are a short design document with accompanying prototype, a demonstration of the project, and a playtesting/user experience report to be provided at the end of the year.

Thesis and Project Selection Process

The thesis/project requirement is 9 credits, which equates to approximately 540 hours of work (12 hours/week for three semesters). The proposal process is designed to help students make the most of that time, ensure faculty loads are balanced, and support the research, creative, and/or teaching goals of the faculty.

Except in circumstances where students independently propose their project or thesis, projects are proposed by the faculty, typically at the end of B term.

MS Project Pitch Day

MS projects are typically pitched by the faculty during a pitch day in B term or, alternatively, emailed to students. Faculty prepare a short description of projects, including:

- The design concept and/or goals of the project
- How many students are needed to complete the project, and what roles each student would take
- What experience students should already have to join the project
- What students will learn in the project
- Any restrictions on when the project can run (e.g. 6 credits in Fall, 3 credits in Spring)

These pitches are presented to graduate students. Faculty can pitch more than one project. Students rank their top two or three projects to work on, and the graduate committee subsequently assigns students to projects. The goal with assignment of students to projects is to help balance the advising load on faculty, and to reduce confusion in situations where there are not enough students interested in each project.

Thesis Topic Selection Process

Faculty submit descriptions of potential theses that they are willing to supervise. Each thesis description should include a research question that serves as a starting point, and the student and advisor may work together to refine this question as part of the thesis proposal process. The thesis description should also list what semesters the advisor expects the thesis to run, to assist students in planning. Faculty submit their potential theses to the graduate coordinator, who will maintain a list of all current theses that faculty are willing to supervise. The list will be updated at the end of A and C terms each academic year.

Students can apply to work on a thesis under faculty supervision. The approval process for joining a thesis is entirely controlled by the supervising faculty member.

Independent Project or Thesis Proposal

Students may propose their own project or thesis, but it must be done before they begin the 9 credits of work. If a student group wishes to propose a project to a faculty member, they develop a short pitch with description at the same level of detail as those that would be generated by faculty. If a student wishes to propose an independent thesis, they should go to the faculty member with the research area that best fits their interest, and generate a description of the thesis at a similar level of detail to that proposed by faculty. Accepting an independently proposed project or thesis is at the faculty members discretion.

Thesis Advising and Milestones

A thesis has a primary advisor and one reader, who constitute the thesis committee. A thesis advisor is responsible for regular meetings with the student and guiding the overall research. The thesis reader is responsible for once-per-term meetings with the student and advisor, offering external feedback and insight.

The thesis proposal should be completed within the first three credits of thesis credit. It constitutes a formal written document that describes the research area, identifies the research question, situates the work in the context of related work, describes the research methods to be used, and how the research question will be answered. The advisor and readers must approve the written proposal before an oral presentation can be scheduled. The oral presentation consists of a 15 minute talk and 5 minute public Q&A period that is open to the public, and then a 10 minute question and critique period from IMGD Steering faculty. The attending faculty vote on the outcome of a thesis proposal, which can be one of three outcomes: a) pass, b) pass with revisions, and c) fail and re-propose. If a student passes with revisions, the committee must approve revisions to the proposal, but the student does not need to present again. If a student fails their proposal, they must revise their proposal and give another oral presentation. Written proposals will be sent to all IMGD faculty at least two days before the presentation date.

The written thesis should be completed by the end of the nine credits. It is a piece of formal academic writing that fully describes the research aims and activities and how it fits into a broader scholarly context. The advisor and readers must approve the written proposal before an oral defense can be scheduled. The

defense consists of a 40 minute public talk, 5 minute public Q&A, and then a private Q&A session that must be attended by the committee, and that other IMGD faculty are welcome to attend. Students should schedule their thesis defense with the program admin (Allison Darling), and provide the thesis title, the abstract, and the committee members. This must happen *at least one week prior to the thesis defense*. The outcomes from the thesis defense can be: a) pass, b) pass with revisions, and c) fail and re-present. As with the proposal: revisions must be approved by the committee; failure means making revisions and giving another defense.

The written thesis goes in the ETD, and students must meet the ETD deadline for their intended graduation date.

Project Advising and Milestones

A project is advised by a faculty member, with another faculty member agreeing to serve as a reader. Advisors meet regularly with students. Readers agree to meet for one hour per term, and to review the design document and final project report prior to their presentation.

Within the first three credits of a project, students must complete a design document for their project, including an early prototype. This design document should describe the experience goal and audience, relate the proposed project to inspiration media, outline major design and technical elements, and give an assessment plan that focuses on playtesting, usability testing, or user experience evaluation. This design document should be accompanied by a prototype. Design documents must be approved by the advisor and readers before students are approved to give their project pitch. Project pitches take the form of a 5 minute public presentation followed by 5 minute public Q&A and 5 minutes of faculty critique.

The two deliverables for an MS project are: 1) an interactive media artifact, and 2) a written report and accompanying video documentation of the overall project. This report should describe the final design, any technical challenges faced and how they were overcome, and the outcomes from assessment. These deliverables must be approved by the advisor and reader. The interactive media artifact must be shown to the public during at least one event (e.g. Showfest, a conference, or a festival), and made available for public use. Students present their final project at a presentation event for all graduate students, delivering a 20 minute talk with 5 minutes for questions.