DIGITAL MEDIA STUDIES 2010–2011

The digital media studies (DMS) program at the University of Denver fosters the work of graduate students interested in the complex synthesis of digital media design and creative expression, innovative technical proficiencies and critical and theoretical scholarship. The program is a unique partnership between the department of media, film and journalism studies and the School of Art and Art History.

Promoting rigorous intellectual engagement and advanced technological skills, the DMS program contributes to the University of Denver’s mission to engage and empower students through the productive synergies of theory and practice, critical thinking and creativity, and scholarly investigation with community engagement. We approach this mission in ways that bring to the foreground technological perspectives and practices, particularly as these advances are taking shape within the contemporary networked environments of computational media, art and communications.

Combining threads of structured study along with opportunities for independent and collaborative work over the course of the two-year program, the master’s degree in digital media studies is organized around three basic categories of courses and related aptitudes:

1. **Critical** courses, which explore digital media theory from numerous disciplinary perspectives
2. **Art and design** courses, which approach digital media as artistic praxis
3. **Technical** courses, which offer instruction in media authoring, computing and other areas of technical production

Our program measures these three aptitudes (critical thinking, innovative art and design, and technical development) and expects the graduate student to demonstrate the synthesis of these aptitudes through complex individual as well as collaborative projects. DMS is currently developing or contributing to the following areas of research and production at the University of Denver:

- **Complex visual/sonic/tangible experiences**: Work in the areas of 3-D animation, gaming, expanded and digital cinema, immersive theater and digital planetaria design, performance, physical computing, tangible user interface design, interactivity and installations.
- **Networked engagement**: Develop projects in social and tactical media, participatory culture, media activism, culture jamming, global media ecology, telematics, file-sharing and P2P capital, and remix and mash-up cultures.
- **Humane computer gaming**: Develop socially conscious, educational, or medical games through this partnership of DMS, electronic media arts design, computer science and the Morgridge College of Education.
- **Sustainable design and practices**: Design environmentally sound human-computer interfaces, e-textiles, wearables and portables and biomedia.
- **Upcoming areas**: Electronic literature and digital writing and technoculture and consciousness studies.

This interdisciplinary program approaches the study of digital media from multiple units of the arts, humanities and social sciences at the University of Denver, including media, film and journalism studies, art and art history, English, philosophy, religious studies and others. Faculty appointed to the DMS program also offer a number of critical studies lectures, seminars and workshops. In addition, to sketch out our curriculum in terms of skill-sets, the hands-on component of the DMS program integrates electronic art and design practices with opportunities
for multimedia authoring and experimentation, animation, game development, tangible computing, interaction design, sound design and processing, visual programming, data visualization and other areas of media computing and production.

We expect our students to become informed participants in the new and converging technocultures and social media networks through which we make meaning, reflect on our individual growth, contribute to cultural production and engage larger social and ethical concerns both personally and professionally. As well as providing points for collaborative projects to develop, the DMS program supports students through its diverse network of internship opportunities and community outreach situations throughout Denver. DMS has its own Outreach Center, which is committed to socially engaged projects, along with multiple layers of involvement with such institutions as the Mayor’s Office of the City of Denver (Denver 2010 Biennial), the Denver Museum of Nature and Science, the Denver Art Museum, Denver Open Media and others.

DMS draws students from many disciplines and backgrounds, and we seek students who have a solid track record of independent thinking and creative problem solving. Preparation for the program should include some sense of the connection across the arts, humanities and sciences (social and natural), and the applicant should seek to participate in digital media’s transformation of our tools of expression, our means of cognition, our methods of symbol processing and our modes of social organization.

ADMISSION REQUIREMENTS

Program Requirements and Deadlines

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<th>Program</th>
<th>Degrees Offered</th>
<th>Number of Credits</th>
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<td>Digital Media Studies</td>
<td>M.A.</td>
<td>48 hours</td>
<td>FT/PT</td>
<td>GRE—varies TOEFL—105/620</td>
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Additional Requirements:
- Three letters of recommendation
- Essay of personal statement
- Official transcripts

Admission Forms:
- Application for Graduate Financial Assistance

APPLICATION PROCESS

Online Application
Submit an online application by accessing myWeb. Click Apply for Admission, log in, and select your degree, college, major and concentration (if applicable). A printable confirmation page will appear after your application has been submitted successfully. You can check your application status by logging back into the application.

Application Fees
There is a $60 nonrefundable application fee that covers the cost of processing application materials. The application fee can be paid online with a credit card at the time of application submission, which is the preferred method, or by selecting “Mail Payment” when submitting the application, in which case a bank draft or personal check drawn from a U.S. bank must be submitted to the address listed below. After an application has been submitted, credit card payment is not available. Applications will not be considered for admission until this fee is paid. No waivers or deferrals are allowed, with the exception of McNair and CORE scholars. A letter of scholar verification must be included with application materials.
APPLICATION PROCESS (continued)

Transcripts
Applicants are required to submit one official transcript from each post-secondary institution they have attended or are presently attending where two quarter hours (or one semester hour) or more were completed. This includes transcripts for credit earned as transfer work or study abroad and college credit earned in high school.

An official transcript must include the original signature of the registrar and/or the seal of the issuing institution, and it must be enclosed in an envelope with the stamp or signature of the registrar across the sealed flap. Transcripts received in unsealed envelopes will not be accepted. Proof of a bachelor’s and/or master’s degree (if applicable) is required from a regionally accredited college or university.

Applications will not be forwarded to the department for review until all official transcripts have been received. The University of Denver is not responsible for obtaining an applicant’s transcripts. All submitted credentials become property of the University of Denver and cannot be copied or returned to the applicant or any person(s).

Graduate Record Exam (GRE)
Applicants must request that Educational Testing Services forward results to the University of Denver, Office of Graduate Studies. The institution code for the University of Denver is 4842. A departmental code is not required. For information concerning GRE registration, please visit www.gre.org or contact:

Graduate Record Examination
Educational Testing Service
PO. Box 6000
Princeton, NJ 08541-6000
609-771-7670

Applicants should take the GRE well in advance of their intended application date. Please allow at least 14 business days for your general test scores and six weeks for your subject test scores to be received. If you take the exam under a name other than the name used on your application, please notify the Office of Graduate Studies. Several departments and schools will not process applications until scores have been received. GRE scores older than five years from the date of the application may not be acceptable for admission.

Letters of Recommendation
Three letters of recommendation are required. Submit the names and accurate e-mail addresses of the people who will write your recommendations with your online application. Within one business day of receiving your application, we will send e-mail requests for your letters. To ensure that your recommenders have time to meet any application deadlines, we suggest that you let them know in advance that our request will be coming. If evaluation forms will also be required, we will include instructions in the e-mail requests.

Scholarships and Financial Aid
Students seeking departmental scholarship or grant aid must submit the Application for Graduate Financial Assistance form, no later than Feb. 16, 2011, in order to be considered for DMS merit-based financial aid in the fall quarter.

Students can apply for two types of financial aid: departmental financial aid — primarily merit-based aid, such as graduate scholarships and teaching assistantships, as well as a limited amount of need-based grant aid, and federal financial aid — including federal student loans and work study. To be considered for need-based and federal financial aid, you must complete and submit the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov by the priority deadline of March 1. For more information about federal financial aid, please visit the Office of Financial Aid’s Web site at www.du.edu/finaid/grad.htm. International students are not eligible to apply for federal financial aid and do not need to file a FAFSA.

Essay/Personal Statement
You should submit a two- to four-page personal statement (approximately 1,000 words). Your statement should explain your motivation for application, personal and professional goals and engagement, aspirations for advanced study and your preparation for graduate-level work at the University of Denver. Please upload and submit the essay with your online application.
DEGREE REQUIREMENTS

Master Of Arts In Digital Media Studies
The M.A. degree is intended for students interested in the interplay of critical scholarship, creative expression, electronic art and design, and hands-on technical research and production in a variety of interconnected, computational media environments. DMS alumni have gone on to work for many corporations, small businesses, government agencies, nonprofit organizations and educational institutions as they continue to integrate developments in new digital technologies for media authoring, content management and networking. Graduates of the program are also prepared for advanced degree work in such fields as cultural and media studies, philosophy, art and art history, English, communication, journalism, business, science studies, education and others.

Credit-Hour Requirements
A minimum of 48 credit hours in DMS and related courses.

Course Requirements
All students are required to take one foundation course in the design area, one foundation course in the technical area and one foundation course in the critical area (for a total of 12 credit hours). Students are required to take one advanced course of their own choosing in the design, technical and critical areas (12 credit hours) and one research methods course (4 hours). With guidance from the graduate director, students will pursue 16 unrestricted elective hours to build upon their work in DMS by pursuing additional advanced DMS graduate courses. In addition, the master’s degree in DMS requires an M.A. project (4 hours) or thesis (4–8 hours).

The graduate foundations curriculum must be completed with a GPA of 3.0 or higher. If it is appropriate and approved by the graduate committee, other graduate-level courses may be substituted for part of the graduate foundations curriculum.

Required courses:
DMST 4000 Digital Design Concepts
DMST 4100 Technical Foundations of Digital Media
DMST 4200 Critical Approaches to Digital Media
DMST 4850 Digital Media Studies Research Methods
DMST 4800 Thesis (4–8 hours) or DMST 4900 Project (1–4 hours)
FACULTY

Christopher Coleman
Assistant professor, media, film and journalism studies and DMS, and graduate program director
M.F.A., University at Buffalo, The State University of New York
Research interests: control systems, chaos and order, digital interaction, physical interaction, borders, animation, appropriation, technological decay, art as activism, audio/video manipulation, systems in nature and object creation

Bill Depper
Lecturer, media, film and journalism studies and DMS
M.F.A., University of Iowa
Research interests: animation development, rendering infrastructures, spatial narrativity and technical pedagogy

Rafael Fajardo
Associate professor, DMS and eMAD
M.F.A., Rhode Island School of Design
Research interests: humane games, cultural identity, cultural representation, visual semiotics, emerging design theory and 21st century design praxis

Melanie Fredericks
Assistant professor, eMAD
M.F.A., University of Denver
Research interests: new media-based public art, open source development and politics, and rapid prototyping

W. Scott Howard
Associate professor, English
Ph.D., University of Washington
Research interests: media and cultural memory, digital archives, modernity (early- through post-) and authorship

James LaVita
Professor, arts, humanities, and social sciences
Ph.D., New York University
Ph.D., University of Texas at Austin
Research interests: dance ethnology and dance history; folklore; performance, aesthetics and expressive culture; technology, and computing and culture

Scott Leutenegger
Professor, computer science
Ph.D., University of Wisconsin-Madison
Research interests: humane games, game theory, game-based educational initiatives and spatio-temporal databases

Laleh Mehran
Associate professor, eMAD
M.F.A., Carnegie Mellon University
Research interests: media politics, cyberfeminist praxis and theory, emerging forms of time-based media and video theory

Trace Reddell
Associate professor, media, film and journalism studies and DMS, and program director
Ph.D., University of Colorado at Boulder
Research interests: digital cinema, dome and planetarium projection, performance media, sound art, cybernetic biofeedback, situationist practice, drug and media ecologies, cosmology and speculative astrobiology, ambient imagination design, dreamware and technoshamanism

Adrienne Russell
Assistant professor, media, film and journalism studies and DMS
Ph.D., Indiana University
Research interests: emerging media tools and practices, and contemporary communication cultures

Timothy Weaver
Associate professor, DMS and eMAD
M.F.A., University of Colorado at Boulder
Research interests: biomedia, biomimetics, bioacoustics, biological narrativity, emerging interactions, live cinema, immersive environments, sustainable design, evolutionary design, ecosemiotics, ecological memory and media ecologies
DMST 4000 Digital Design Concepts
This course is a graduate-level/introductory design course on steroids! It bridges the gap between those who claim they’re unable to render a straight line and those who proclaim art stardom. It is a rigorous investigation into transcending principles of design, issues of visual communication, popular culture and critical theory. The ever-present goal is the ability to communicate clear ideas through the use of images — establishing not just aesthetic presentations but ones that are also based on intent and concept. Creativity and critical approaches are the main principles guiding all that this course presents. By the end of the course, the goal is for all of the students to be aware of how images communicate, how people read visuals and how to construct visuals in a critical and aesthetic way. 4 qtr. hrs.

DMST 4100 Technical Foundations of Digital Media
The course will provide the fundamental concepts of digital systems. Study of the number systems and components of computers (hardware and firmware) and how they function to solve problems. This course also provides an introduction to interactive concepts and programming. Using current tools, such as Processing, as a development platform, issues of production process, interface, interaction and information design will be discussed. Additionally, the course will touch upon employing animation and motion within the interface. After gaining experience within the timeline development environment, students will learn basic programming concepts to extend their digital practices within this tool. Basic programming concepts will be explored as well as object oriented approaches to programming. 4 qtr. hrs.

DMST 4200 Critical Approaches to Digital Media
This course examines major historical, cultural, sociopolitical, philosophical and other critical trends in this field of digital media studies. The rapid growth of participatory culture online through, for example, interactive news sites, community boards, bookmarking, tagging, virtual worlds, gaming, instant messaging, social networking and blogging has had significant social implications and brings up issues of privacy, intellectual property and the nature of community and public engagement. This class will explore these issues as they manifest in various cases including politics, intellectual property, youth culture, activism, journalism and art. 4 qtr. hrs.

DMST 4150 Activist Media
Today’s alternative cultures use Internet and mobile technologies to access and circulate mainstream information, but also to rapidly exchange information that exists outside mainstream media channels. Activist movements today with access to digital tools and networks are no longer dependent on newspapers and broadcast networks to represent them and disseminate their messages. We are, however, just beginning to see how the proliferation of alternative networks of communication, and the content, practices and identities they facilitate, interact with traditional political and business organizations, as well as with traditional media products and practices. This course focuses on media activism over the past half-century tied to various social movements with an emphasis on contemporary protest movements and their use of new and old media tools and strategies. 4 qtr. hrs.

DMST 4160 Networked Journalism
This course traces the shift that has taken place over the past 15 years from mass-mediated journalism to networked journalism, with an emphasis on experiments in citizen and participatory news and on the changing relationship between journalists and their publics. It explores emergent communication technologies and practices and how they are changing the news media landscape. 4 qtr. hrs.

DMST 4211 Tangible Interactivity
Explores methods and devices for human-computer interaction beyond the mouse and keyboard. Students will learn to create and hack electronic input and output devices and explore multi-touch, augmented reality and other forms of sensor-based technologies. 4 qtr. hrs.

DMST 4212 Programming for Play
This course offers an introduction to the creation of games and playful interactive objects. Students will be exploring the space of socially conscious and humane games as well as investigating the creation of compelling interfaces and interactive opportunities. 4 qtr. hrs.

DMST 4213 Visual Programming
The introduction to intuitive visual programming that allows you to quickly build your own tools for data/video/image/sound manipulation. These tools can be used in real-time editing or performance, complex effects processing, or even bridging between other pieces of software. 4 qtr. hrs.

DMST 4230 Interaction and Collaboration
Students will combine skills to create complex interactive works which encourage social collaboration of its users. 4 qtr. hrs.

DMST 4250 Advanced Critical Approaches to Digital Media
This advanced seminar provides DMS students an opportunity to explore speculative media authoring and theoretical tool development as a critical approach to digital practices and experience. The course combines the close study of texts and media in multiple formats with opportunities for writing and other forms of media authoring. The course opens up critical assessment of digital practice, structures and experience to the creative exercises of speculation, extrapolation, intuition and imagination. 4 qtr. hrs.

DMST 4501 Web 2.0 Design and Content Management
This course will cover the building and management of Web pages using CSS and XHTML. The course will also cover creating sites using open source content management systems, preferably for applications related to the not-for-profit sector. Students will learn to integrate Web 2.0 content into sites as well as gain a knowledge of user experience design practices. 4 qtr. hrs.

DMST 4502 Advanced Web Building
Different sections of this course address various aspects of advanced Web design and building, including Web application development, Flash MX, ActionScripting, Javascript, streaming content and content-on-demand, and more. 4 qtr. hrs.
DMST 4550 Digital Audio Production
This course introduces the tools and techniques of digital audio production, including sampling and synthesis; sound editing and effects processing; multitrack recording; audio sequencing and mastering; and distribution. 4 qtr. hrs.

DMST 4560 Advanced Digital Audio Production
This class applies the tools and strategies of digital audio production to interactive projects and live performances. Students will have the opportunity to author digital audio for the Web. This course will combine solo projects with additional production opportunities taking place in a networked collaborative environment. While the emphasis of the class is on production, the class will explore and discuss recent trends in the field of digital audio from various technological, creative and cultural perspectives. 4 qtr. hrs.

DMST 4570 Digital Sound Cultures
This course explores some of the cultures of artists, producers, distributors and listeners that have formed around digital audio technologies. The class combines reading of critical texts with the study of several audio genres, ranging from post-WWII electronic music to hip-hop, dub, techno and jam bands. Interdisciplinary in approach, the main critical methods brought to this material are drawn from philosophy, media archaeology, media studies, science fiction studies and a wide variety of music-related writings. For output, students will produce sets of audio and written media on the sound-related issues, artifacts, and practitioners of their choice, culminating in a podcast. 4 qtr. hrs.

DMST 4600 Introduction to 3-D Modeling
This course will serve as an introduction to 3-D modeling, texturing and lighting on the computer. Students will complete a series of projects in which the processes of preparing and producing a 3-D piece will be explored. Various strategies and techniques for creating detailed models to be used in animation and games will be examined. Additional attention will be spent on virtual camera techniques as well as the use of compositing in creating final pieces. Current trends in the field will be addressed through the analysis and discussion of current and historical examples. 4 qtr. hrs.

DMST 4620 2.5-D Poetics
This course provides students an opportunity to create multidimensionally active poetic orchestrations of text, video and audio using the post-production processing and animation tool, After Effects. 4 qtr. hrs.

DMST 4630 3-D Animation and Character Animation
This course examines animation within virtual 3-D environments. Starting with basic concepts, the course will develop timing and spacing principles in animation to support good mechanics. They will also serve as the basis for the more advanced principles in character animation as the class progresses. 4 qtr. hrs.

DMST 4650 3-D Spaces: Narrative, Games and Visualization
This course explores 3-D digital space and the possibilities found in games, narratives and visualizations in these spaces. A real-time engine will be used by students to examine the opportunities of virtual 3-D worlds. 4 qtr. hrs.

DMST 4690 Digital Cinema, Theory and Practice
This course introduces such forms of digital cinema as video remixes and cinemashups; visual music; ambient video; sonic visualization; and live cinema and VJing. The class covers multitrack video and audio mixing, with an emphasis on live, performative approaches, including VJ tools and a variety of systematic approaches to making computer-generated or manipulated video. The class incorporates reading and discussion of several critical texts and documentation of digital cinematic theory, process and practices, and the class will include screening and discussion of examples of digital cinema. 4 qtr. hrs.

DMST 4700 Graduate Topics Seminar
Various special topics in critical studies offered throughout the year have recently included sustainable design; game design; Gibson seminar; sculpture workshop; Heidegger seminar. 4 qtr. hrs.

DMST 4800 Thesis (4–8 qtr. hrs.)
DMST 4850 Research Methods
This course provides graduate students with strategies and techniques for conducting advanced research in the area of digital media studies. Emphasis includes Web-based research, literature reviews, critical analysis and theoretical writing, logistics planning and project management. By the end of the course, students should be able to conduct advanced research in digital media studies, situate his/her work in the context of contemporary research and theory, and plan and propose a master’s-level thesis or project.

DMST 4900 Project (1–4 qtr. hrs.)
eMAD Courses
(DMS graduate students also take courses from the eMAD catalog)
DMST 4335 Identity and Branding
DMST 4345 Typography
DMST 4355 Net Art and Design
DMST 4365 Digital Video Art
DMST 3315 Designing Social Awareness
DMST 3325 Site-Specific Design
DMST 3355 Interactive Art and Design
DMST 3375 Advanced Design