

Florida Board of Governors

Request to Offer a New Degree Program

Florida Atlantic University
University Submitting Proposal

Fall 2011
Proposed Implementation Date

Dorothy F. Schmidt College of Arts and Letters
Name of College or School

School of Communication and
Multimedia Studies
Name of Department(s)

Multimedia Studies
Academic Specialty or Field

MFA in Media, Technology and
Entertainment (09.0702)
Complete Name of Degree
(Include Proposed CIP Code)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial resources and the criteria for establishing new programs have been met prior to the initiation of the program.

Date Approved by the University Board of Trustees President Date

Signature of Chair, Board of Trustees Date Vice President for Academic Affairs Date

Provide headcount (HC) and full-time equivalent (FTE) student estimates of majors for Years 1 through 5. HC and FTE estimates should be identical to those in Table 1. Indicate the program costs for the first and the fifth years of implementation as shown in the appropriate columns in Table 2. Calculate an Educational and General (E&G) cost per FTE for Years 1 and 5 (Total E&G divided by FTE).

Implementation Timeframe	Projected Student Enrollment (From Table 1)		Projected Program Costs (From Table 2)		
	HC	FTE	Total E&G Funding	Contract & Grants Funding	E&G Cost per FTE
Year 1	12	11.26	\$124,006		\$11,013
Year 2	24	22.50			
Year 3	24	22.50			
Year 4	24	22.50			
Year 5	24	22.50	\$161,505		\$7,178

Note: This outline and the questions pertaining to each section must be reproduced within the body of the proposal to ensure that all sections have been satisfactorily addressed.

INTRODUCTION

I. Program Description and Relationship to System-Level Goals

A. Briefly describe within a few paragraphs the degree program under consideration, including (a) level; (b) emphases, including concentrations, tracks, or specializations; (c) total number of credit hours; and (d) overall purpose, including examples of employment or education opportunities that may be available to program graduates.

(a) The proposed degree is an interdisciplinary MFA in Media, Technology and Entertainment involving the Multimedia Studies degree program in the School of Communication and Multimedia Studies in the College of Arts and Letters; and the Department of Computer Science and Engineering in the College of Engineering and Computer Science at Florida Atlantic University.

(b) The proposed graduate degree would combine film, video, interactive media and computer animation faculty with computer science and engineering faculty, with the aim of fostering in their graduate students innovative approaches to digital entertainment that stretch creative and scientific boundaries. In other words, faculty will challenge themselves and their students to thinking in artistic, scientific and industrial terms about: 1) innovative forms of digital media practice within film and video production, video gaming, web-based interactive media, and mobile media; 2) new pipeline models for media production, such as 3D processing for film and game development and physics-based medical and scientific visualization; 3) practical applications, such as interface design, hardware and software, enhanced content delivery, and ubiquitous computing.

Students receiving the MFA would take 60 graduate credit hours over the course of two-plus years (54 credits of class hours taken over two years, plus 6 credits of thesis hours), following a series of required courses offered in both Multimedia Studies and Computer Science, and choosing from a complement of electives designed to foster specializations. As part of their required coursework, students would take two studio courses with combined Multimedia and Computer Science faculty members, with ART 6692C offered the first semester of their second year and ART 6688C offered the second semester of their second year. These courses would be project-based. Finally, as part of their thesis work, students would do a public presentation of their projects and invite potential venture capitalists.

- (c) The proposed program is a 60 credit hour program, following the model of other MFA programs offered at FAU and at other research institutions.
- (d) This degree program is based on the guidelines for the NSF Graduate Research Traineeship (IGERT) program which seeks “to catalyze a cultural change in graduate education for students, faculty and institutions, by establishing innovative new models for graduate education in a fertile environment for collaborative research that transcends traditional disciplinary boundaries contributing to a world-class, broadly inclusive, and globally engaged science and engineering workforce.”

B. Describe how the proposed program is consistent with the current State University System (SUS) Strategic Planning Goals. Identify which goals the program will directly support and which goals the program will indirectly support. (See the SUS Strategic Plan at <http://www.flbog.org/StrategicResources/>)

FAU’s Strategic Plan includes seven goals. Goal 2 is to meet statewide professional and workforce needs. Further, FAU is committed to expend academic and fiscal resources to train professionals in “nursing, teaching and advanced technology.” The proposed graduate degree program is consistent with that goal. The proposed MFA also falls within the current SUS inventory of academic degree programs offered in areas of programmatic strategic emphasis; in particular, it will expand the College of Arts and Letters contribution to STEM (Science, Technology, Engineering and Mathematics) education, building on the College’s already existing undergraduate contribution to STEM, the BA in Multimedia Studies. The January 2010 report issued by the Florida Center for Research in Science, Technology and Mathematics, a study funded by the U.S. Department of Labor’s Employment and Training Administration, outlines the need for a STEM-proficient workforce to advance Florida’s innovation economy: “The findings indicate that 15 of the 20 fastest growing jobs through 2014 will require substantial math and science preparation, and that Florida, as well as the United States more generally, is failing to develop an adequate supply of STEM-capable workers. Florida’s increasingly knowledge-based economy is driven by innovation, which has as its foundation a dynamic and well-educated workforce equipped with STEM knowledge and skills. While the economy calls for a larger and more proficient STEM workforce, enrollment and success in those courses is declining. As a state and nation, we are losing ground.” Meeting this challenge, the proposed MFA will contribute to enhanced STEM education and training to help position the Florida SUS as a leader in market-relevant STEM talent development and retention. The program takes a dynamic approach to fostering connections between science, technology, engineering, and the varied media industries that are driving and benefiting from applied innovation.

INSTITUTIONAL AND STATE LEVEL ACCOUNTABILITY

II. Need and Demand

- A. Need: Describe national, state, and/or local data that support the need for more people to be prepared in this program at this level. Reference national, state, and/or local plans or reports that support the need for this program and requests for the proposed program which have emanated from a perceived need by agencies or industries in your service area. Cite any specific need for research and service that the program would fulfill.**

According to the U.S. Bureau of Labor Statistics Occupational Outlook Handbook, 2008/2009 Edition, Computer Software Engineers and Multimedia Artists and Animators are among the occupations projected to have above average growth over the 2006/2016 decade. Projected growth for Computer Software Engineers is 38% and for Multimedia Artists and Animators the projected growth is 16 %. The average incomes for both job categories was above \$80,000.

According to Employ Florida Labor Market Services, Occupational Profiles, jobs for Computer Software Engineers are expected to grow by 5.1% per year from 2008 to 2016. There was no category for Multimedia Artists and Animators in the State job categories nor was there a category for Film Animators or Computer Animators; however, Web Developers were estimated to grow 1.2% per year until 2016.

The Florida Film Commission which reports to the Governor's Office of Film and Entertainment projects the following job growth in EMSI Complete Employment – Fall 2008. Employment Forecast for selected Digital Media Occupations in Florida. Estimate from 2008 to 2018: Computer Specialists, 16% increase; Multimedia artists and animators, 25% increase; Graphic Designers, 14% increase; Sound engineers, 12% increase; Photographers, 3% increase; Film and video editors, 18% increase. These are the sectors that will be served by the proposed MFA in Media, Technology and Entertainment.

- B. Demand: Describe data that support the assumption that students will enroll in the proposed program. Include descriptions of surveys or other communications with prospective students.**

A number of universities in the Florida SUS offer undergraduate degrees in computer science as well as in some form of media production. These programs are

traditionally separated and housed in different colleges. However, with the growth of shared digital technologies, computer science and new media and animation faculties increasingly speak the same technical language and deal with different aspects of new media applications.

In the 2009/2010 academic year there were 1152 majors in the School of Communication & Multimedia Studies. Of that number 442 were Multimedia Studies majors. Multimedia Studies majors must have a grade point average of 2.5 or better to enter and to continue in the program. The BA in Multimedia Studies in the School of Communication & Multimedia Studies is the only academic program in the College of Arts and Letters included in the NET (nursing, teaching and advanced technology) categories targeted for growth in the Strategic Plan. It is the only academic program in the College of Arts and Letters that is included in the STEM (Science, Technology, Engineering and Mathematics) categories targeted as potential growth areas by the state of Florida.

One section of FAU's new Culture and Society Building will house the School of Communication and Multimedia Studies' four new digital cinemas. The BA in Multimedia Studies was designed to prepare students to work in newly converged media industries that utilize the Internet as their main distribution system. The Department of Computer Science and Engineering in the College of Engineering and Computer Science at FAU is noted for its ground-breaking work in 3D camera development and 3D medical imaging.

There are synergies between the two faculties that can be enhanced in an interdisciplinary MFA that would draw students from undergraduate computer engineering and digital media production programs in the SUS and particularly from FAU.

C. If similar programs (either private or public) exist in the state, identify the institution(s) and geographic location(s). Summarize the outcome(s) of any communication with such programs with regard to the potential impact on their enrollment and opportunities for possible collaboration (instruction and research). Provide data that support the need for an additional program.

The following Florida SUS universities offer undergraduate degree programs specifically in digital media production:

- 1) University of Central Florida, Department of Digital Media and Department of Film, College of Arts and Humanities
- 2) University of Florida, Department of Digital Media, College of Art and Art History

3) Florida Atlantic University, School of Communication and Multimedia Studies, BA in Multimedia Studies, College of Arts and Letters

The following Florida SUS universities offer graduate degrees in digital media:

1) UCF has a strong relationship with Walt Disney Enterprises and with Universal Pictures, both of which have offices and production facilities located in Orlando. The College of Arts and Humanities offers an MFA in Film and Digital Media which intends “to educate the next generation of filmmakers and media entrepreneurs...” This MFA prepares students to work in the Hollywood style cinema industry. UCF also offers an MS in Interactive Entertainment. The program “provides specific skills in the area of game design.” It is part of the Florida Interactive Entertainment Academy. This program is supported by and feeds local industry.

2) UF offers an MS/MA in Digital Arts & Sciences in the Digital World Institute supported by the College of Fine Arts and the College of Engineering. The aim of this Institute is “to develop fluency in technologies and design practices....” Graduates “seek employment in the creative services sector...from traditional cinema to interactive games; from broadcast media to online networks...” According to the Digital Worlds Institute website, the work of affiliated faculty and researchers “is focused in two areas: the first is integrating the Arts into Science, Technology, Engineering and Mathematics education...The second is Health Science, with projects using interactive virtual environments in therapeutic applications including autism, post-traumatic stress disorder and reducing substance abuse and risky behavior in under-served populations.”

The difference between the UCF and UF programs and the one proposed at FAU is that we do not wish to prepare our graduates to fit into existing media companies. We want them to invent new applications that can be tried out at FAU and can be capitalized and become new business ventures in South Florida. We are invested in exploring new industrial configurations borne out of developing models of media convergence, as well as convergences between science, art and entertainment.

Our program aims to explore the intersections among entertainment arts, technology and computation in order to creating new, interdisciplinary models for research and development. As digital media production expands to include distributed computing facilities, industry artists and programmers are increasingly asked to collaborate. Media artists commonly encounter challenges that researchers face in scientific computing. More importantly, computation and interface design inform fundamental aspects of everyday life and are a foundational part of a broad range of industries. The conceptual and practical models of traditional media fields inform the medical and scientific applications of new technologies, and the conceptual and practical models of the physical sciences increasingly inform traditional entertainment media applications.

Dr. Paul Fishwick, Professor of Computer Simulation, Music and Art at UF and the advisor for the MA/MS in digital Arts and Sciences, informed us that the engineering graduate students in the MS part of the MA/MS in Digital Arts and Sciences in the Digital Worlds Institute take 30 credits of human-centered computer science classes for their MS and they may take an optional 6 credits of arts classes. Art students take 30 credits of digital art courses and may take 6 optional credits in computer engineering. Both masters programs require a thesis. Dr. Fishwick said that “it would be ideal to have artists and engineer getting together, but they don’t do that right now.”

The proposed program would include “the ideal.” The ideal can be found in the Arts, Media and Engineering program at Arizona State University. Dr. Hari Sundaram, Associate Director of the program and Associate Professor of Computer Science and Engineering, emphasized to us that Computer Engineering students must be in the classroom with new media and animation students in order to create a new interdisciplinary class of media scientists. It is through mutual understanding that real breakthroughs occur. The Arts, Media and Engineering Ph.D. at ASU is funded by a National Science Foundation IGERT grant.

Our intention is to include disciplinary-specific courses and interdisciplinary courses in the program core, and to include team-taught studio courses as capstone workshops in the second year of the curriculum. In the team-taught classes, students will be divided into project teams. Each team will work on specific applications, guided by a professor from each discipline. At the end of the second year, and as part of individual thesis work, a public presentation of project-based applied research will be made. Private individuals and representatives of private companies will be invited with the hope of interesting them in capitalizing on applicable research and development tools. It is our intention to apply for an NSF IGERT to fund student assistantship grants as our program becomes successful.

- D. Use Table 1 (A for undergraduate and B for graduate) to categorize projected student headcount (HC) and Full Time Equivalents (FTE) according to primary sources. Generally undergraduate FTE will be calculated as 40 credit hours per year and graduate FTE will be calculated as 32 credit hours per year. Describe the rationale underlying enrollment projections. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines that will likely occur.**

The MFA students will be drawn from FAU’s BA in Multimedia Studies and FAU’s BA in Studio Art. It is important to note that although we intend to draw our own students into this graduate program, there are many universities in the Florida SUS with undergraduate degrees in film and video production but without graduate degrees in digital media, technology and entertainment, from which we can draw students. For example, FIU has a School of Journalism and Mass Communication; FSU has a

College of Motion Picture, TV and Recording Arts; UNF has a Department of Communication with a track in Electronic Media; FAMU has a Department of Visual Arts with a concentration in Digital Imaging and Animation; UWF has a Department of Communication Arts with a concentration in Telecommunication and Film.

Our intention, as is reflected in Table 1, is to begin Year One with 12 fulltime MFA students. We estimate that many more students will apply to the graduate program, given the growing interest in animation, film, video games, smart phones and computerized social networking, than will be accepted. However, we have been advised that the development of effective team-taught classes should be approached initially without large numbers of students. We anticipate that growth in the number of students accepted in the program will be steady and be dependent more on the professors' ability to guide students effectively in their final projects than on numbers of applicants to the degree program.

We anticipate that many working professionals will want to enroll part time; however, we will wait until we have the program running smoothly before adding part time students to the mix. The elements of team creation and team building around project ideas will be important to develop initially with fulltime students who are fully immersed in the program. Therefore, we anticipate that initially students will take 26 credits during their first year, 28 credits during the second year, and 6 credits of thesis following the second year of coursework, to complete what is a two-plus years graduate program.

We are not expecting students within the institution to change majors to enroll in the proposed program, therefore we are not anticipating a shift from disciplines. The Department of Visual Arts and Art History transferred all of its resources in computer animation (faculty, equipment, teaching assistantships, and program budget) to the School of Communication and Multimedia Studies in Fall 2008. The move was carefully planned and executed, and welcomed by both programs. Computer animation has become a very important part of film, video and television production, and its position in the School of Communication aligns it with these related media, and the School's additional offerings in interactive multimedia. The Department of Visual Arts and Art History is phasing out its current MFA in Computer Arts and Animation, to be timed with the launch of the new MFA in Media, Technology and Entertainment. Current Computer Arts graduate students will be given the necessary support from both programs to finish their studies. As a result, no programs will be adversely affected by the new degree.

- E. Indicate what steps will be taken to achieve a diverse student body in this program, and identify any minority groups that will be favorably or unfavorably impacted. The university's Equal Opportunity Officer should read this section and then sign and date in the area below.**

We anticipate that the demographic characteristics of the proposed program will be similar to those of the undergraduate programs in the School of Communication and Multimedia Studies and the Department of Computer Science and Engineering. According to FAU's Office of Institutional Effectiveness, the School of Communication and Multimedia Studies has 21 Asian or Pacific Islander; 162 Black; 203 Hispanic; 4 Native American; 17 Non-resident alien; and 628 White student majors. The Department of Computer Science and Engineering has 82 Asian or Pacific Islander; 139 Black; 151 Hispanic; 2 Native American; 107 Non-resident Alien; 310 White student majors.

Appropriate initiatives will be taken to ensure that the MFA in Media, Technology and Entertainment is marketed to a diverse group of prospective students.

Equal Opportunity Officer

Date

III. Budget

- A. Use Table 2 to display projected costs and associated funding sources for Year 1 and Year 5 of program operation. Use Table 3 to show how existing Education & General funds will be shifted to support the new program in Year 1. In narrative form, summarize the contents of both tables, identifying the source of both current and new resources to be devoted to the proposed program. (Data for Year 1 and Year 5 reflect snapshots in time rather than cumulative costs.)**

The courses offered in the new degree program are all currently being offered by the separate contributors to the program – the School of Communication and Multimedia Studies and the Department of Computer Science and Engineering. The inclusion of these courses in the program will not impact faculty assignment. No new courses are to be developed. The capstone studio courses included in the program are already in the FAU catalogue; these two courses will be revised to allow collaborative teaching.

The shift in E&G funds in Year 1 represents a percentage of faculty assignment from those participating faculty in the two contributing units – Communication and Computer Science. Year 5 reflects a more normative cost pattern, as the program reaches full enrollment capacity from Year 2 forward.

The only new budget item is an additional instructional line, to begin academic year 2012; this line is dedicated to the teaching and management needs of the program, with an assignment split between instruction and digital content management (managing the student work pipeline and migrating student and faculty-produced content for web-based and mobile delivery). This line does not represent new resources, but will instead be funded through a reallocation of existing OPS funds from both the School of Communication and Multimedia Studies and the Department

of Computer Science and Engineering; it will be a joint appointment. Funded after Year 1, this position is reflected in Year 5 costs. This position is counted as “new educational and general revenue” in Table 4, even though it is simply a reallocation of existing revenue, in order to highlight the change in Person Years, which follows the change in FTE.

- B. If other programs will be impacted by a reallocation of resources for the proposed program, identify the program and provide a justification for reallocating resources. Specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants). Explain what steps will be taken to mitigate any such impacts. Also, discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting-edge research, improved labs and library resources).**

In the School of Communication and Multimedia Studies, faculty are already assigned to undergraduate and graduate teaching. With the recent addition of two new animation faculty (hired in 2009 and 2010), the School will have adequate coverage for both its undergraduate and graduate course offerings. As faculty in Multimedia Studies are assigned to teach graduate courses, we will still have sufficient coverage to maintain our head counts in the undergraduate program.

In the Department of Computer Science and Engineering, there will be no reallocation of faculty resources; all of the courses listed in the proposed program are regularly offered by the Department. The only adjustment to assignment will be made in the two capstone courses, which will be team taught.

The programs have already collaborated in the development of new instructional/research facilities at the Fort Lauderdale campus that will serve the degree; these facilities are already funded and were completed during the Spring 2010 term. The programs also collaborated on the development of a new Tower Standard Desktop Image, securing the necessary funds and resources from recently instituted Technology Fees to support cutting-edge software driven instruction on the Fort Lauderdale campus. These funds have already been allocated, and the new desktop environment was implemented and tested during the Summer 2010 term.

- C. Describe other potential impacts on related programs or departments (e.g., increased need for general education or common prerequisite courses, or increased need for required or elective courses outside of the proposed major).**

None.

D. Describe what steps have been taken to obtain information regarding resources (financial and in-kind) available outside the institution (businesses, industrial organizations, governmental entities, etc.). Describe the external resources that appear to be available to support the proposed program.

No external resources are currently needed, although Multimedia Studies has an Advisory Board of industry partners; membership will be expanded to match the scope of the new degree. The degree program is also a member of a number of related professional organizations including SIGGRAPH and the Society for Cinema and Media Studies.

IV. Projected Benefit of the Program to the University, Local Community, and State

Use information from Table 1, Table 2, and the supporting narrative for “Need and Demand” to prepare a concise statement that describes the projected benefit to the university, local community, and the state if the program is implemented. The projected benefits can be both quantitative and qualitative in nature, but there needs to be a clear distinction made between the two in the narrative.

The Projected growth in FTE outlined in Table 1 follows the trend for projected professional growth outlined by the U.S. Bureau of Labor Statistics Occupational Outlook Handbook and Employ Florida Labor Market Services. The goal of the MFA is to keep pace with the growing need for a STEM-proficient workforce to advance the local and national innovation economy. The proposed MFA will contribute to enhanced STEM training and retention; the unique configuration of the program positions it as a potential leader in curricular planning for market-relevant STEM education. To this end, the program takes a dynamic approach, responding to the evolving industry landscape by fostering connections between science, technology, engineering, and the varied media industries that are driving and benefiting from applied innovation.

V. Access and Articulation – Bachelor’s Degrees Only

A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum and submit a request to the BOG for an exception along with notification of the program’s approval. (See criteria in BOG Regulation 6C-8.014)

Not applicable.

- B. List program prerequisites and provide assurance that they are the same as the approved common prerequisites for other such degree programs within the SUS (see Common Prerequisite Manual <http://www.facts.org>). The courses in the Common Prerequisite Counseling Manual are intended to be those that are required of both native and transfer students prior to entrance to the major program, not simply lower-level courses that are required prior to graduation. The common prerequisites and substitute courses are mandatory for all institution programs listed, and must be approved by the Articulation Coordinating Committee (ACC). This requirement includes those programs designated as “limited access.”**

If the proposed prerequisites are not listed in the Manual, provide a rationale for a request for exception to the policy of common prerequisites. NOTE: Typically, all lower-division courses required for admission into the major will be considered prerequisites. The curriculum can require lower-division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper-level 60 credit hours. If there are already common prerequisites for other degree programs with the same proposed CIP, every effort must be made to utilize the previously approved prerequisites instead of recommending an additional “track” of prerequisites for that CIP. Additional tracks may not be approved by the ACC, thereby holding up the full approval of the degree program. Programs will not be entered into the State University System Inventory until any exceptions to the approved common prerequisites are approved by the ACC.

Not applicable.

- C. If the university intends to seek formal Limited Access status for the proposed program, provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that community college transfer students are not disadvantaged by the Limited Access status. NOTE: The policy and criteria for Limited Access are identified in BOG Regulation 6C-8.013. Submit the Limited Access Program Request form along with this document.**

Not applicable.

- D. If the proposed program is an AS-to-BS capstone, ensure that it adheres to the guidelines approved by the Articulation Coordinating Committee for such programs, as set forth in Rule 6A-10.024 (see Statewide Articulation Manual <http://www.facts.org>). List the prerequisites, if any, including the specific AS degrees which may transfer into the program.**

Not applicable.

INSTITUTIONAL READINESS

VI. Related Institutional Mission and Strength

A. Describe how the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan.

Goal Two of FAU's Strategic Plan is to meet statewide professional and workforce needs. In particular, FAU has committed to developing NET programs – those in Nursing, Education and Technology. Both Computer Science and Engineering and Multimedia Studies are included in that category. An interdisciplinary MFA combining students and professors in the two NET programs would be consistent with Goal Two.

The proposed MFA also falls within the current SUS inventory of academic degree programs offered in areas of programmatic strategic emphasis; in particular, it will expand the College of Arts and Letters contribution to STEM (Science, Technology, Engineering and Mathematics) education, building on the College's already existing undergraduate contribution to STEM, the BA in Multimedia Studies.

B. Describe how the proposed program specifically relates to existing institutional strengths, such as programs of emphasis, other academic programs, and/or institutes and centers.

The proposed MFA in Media, Technology and Entertainment will build on the intellectual resources already established in Computer Science and Engineering – 3D technology and new mobile technologies and applications; and in Multimedia Studies – film, video, computer animation, and interactive and web-based media design. The planning process for this MFA revealed the natural connections between the research and creative work presently being done in each academic program. The proposed MFA will strengthen those connections. Interdisciplinary cooperation between Engineering and Arts and Letters will bring to the academy the kind of innovation presently sought in the entertainment and mobile media industries. Practitioners say that when it comes to new technology, students have to step out of the present and into the past when they go to school. This proposed MFA will require students and faculty to improve the present and invent the future.

C. Provide a narrative of the planning process leading up to submission of this proposal. Include a chronology (table) of activities, listing both university personnel directly involved and external individuals who participated in planning. Provide a timetable of events necessary for the implementation of the proposed

program.

In Fall 2008, the computer animation faculty moved from the Department of Visual Arts and Art History to the Multimedia Studies program in the School of Communication and Multimedia Studies. The move was welcomed because computer animation has become a very important part of film, video and television production. The Film, Video and New Media curriculum is located in the BA in Multimedia Studies. The movement of animation faculty was accompanied by the movement of their resources (labs, equipment, teaching assistantships, and program budget).

The Department of Visual Arts and Art History kindly agreed to continue to support MFA students with an emphasis in Computer Animation until the Multimedia Studies faculty could propose their own MFA. The Multimedia Studies faculty decided to create an MFA that would expand the scope of study to include computer animation, film, video, and new media. Faculty members in Multimedia Studies were aware of the development of 3D cinema cameras being done by faculty in the Department of Computer Science and Engineering, and so it was decided to ask the Department of Computer Science and Engineering to participate in the new MFA. Faculty members determined that the entertainment industry had a growing need for people with knowledge of all aspects of digital production including an understanding of technological issues. Furthermore, Computer Science and Engineering currently houses courses in mobile technologies and computer animation, with a focus on hardware and software design and coding that complements the emphasis on content generation in the School of Communication and Multimedia Studies.

Talks began in Spring 2009 between Dr. Susan Reilly, Director of the School of Communication and Multimedia Studies and Dr. Borko Furht, Chair of Computer Science and Engineering. The following faculty members from both programs were included in the discussions: Dr. Eric Freedman, Associate Director of the School of Communication and Multimedia Studies, Dr. Oge Marques, Associate Chair of Computer Science and Engineering, and Dr. Hari Kalva, Associate Professor of Computer Science and Engineering. At that meeting the computer scientists showed Dr. Freedman and Dr. Reilly their 3D lab. Drs. Reilly and Freedman subsequently asked Drs. Marques and Kalva to show several other new media faculty members their 3D lab.

Later that spring, the new media faculty invited their computer science colleagues to the Fort Lauderdale campus to look at the technology in the computer animation and video production labs. There was a definite interest among faculty members in both programs to pursue an interdisciplinary degree program. It was decided to look for similar interdisciplinary programs at other universities. Drs. Marques and Kalva suggested that we look at the program at Arizona State University. Dr. Kalva had a colleague working there who could explain the program to us. Dr. Freedman suggested that we explore the programs at UCF and UF.

Dr. Oge Marques was invited to be on the search committee for a new computer animation faculty position hired by the School of Communication and Multimedia Studies in Fall 2009. He was asked again to be on the search committee for a new computer gaming faculty position in Spring 2010. Both of these new faculty members in the School of Communication and Multimedia Studies would teach in the new MFA. During Fall 2009, Dr. Furht contributed funds to supplement funds provided by Dr. Joyanne Stephens, Vice President and Associate Provost of Regional Campuses, to build a new computer gaming facility on the Fort Lauderdale Campus to be used by students in the new MFA. Hence, both the School of Communication and Multimedia Studies and Computer Science and Engineering have already committed resources to the proposed degree.

After gathering information from all of the suggested model programs, the group met again in Fall 2009 to plan the curriculum for the MFA at FAU. This document has been approved enthusiastically by both Dr. Reilly and Dr. Furht, the faculty members and their respective Deans. There are already prospective students waiting for the degree to be implemented and looking to move directly from the MFA in Computer Arts and Animation into the new degree. We have a history of strong application numbers to the existing MFA in Computer Arts and Animation, a program that will be phased out with the implementation of the new MFA in Media, Technology and Entertainment.

Planning Process

Date	Participants	Planning Activity
Fall 2008	Susan Reilly, Eric Freedman, Linda Johnson, Francis McAfee	Computer Arts moves from the School of the Arts to the School of Communication & Multimedia Studies
Spring 2009	Susan Reilly, Eric Freedman, Borko Furht, Oge Marques, Hari Kalva	Meeting of program directors in Multimedia Studies and Computer Science and Engineering to discuss collaboration and an interdisciplinary degree
Spring 2009	Susan Reilly, Eric Freedman, Borko Furht, Oge Marques, Hari Kalva, and additional faculty from Computer Science and Engineering and Multimedia Studies	Meeting of faculty and directors at the Fort Lauderdale campus to discuss collaboration, develop a degree timeline, and review facilities and resources
Spring 2009	Susan Reilly, Eric Freedman, Oge Marques, Hari Kalva	Review of other related statewide and national programs, pulling together curricular models
Fall 2009	Eric Freedman, Francis McAfee, Stephanie Cunningham, Oge Marques	Search and hiring of new tenure-track faculty in computer animation, Mark Franz

Fall 2009	Eric Freedman, Borko Furht, Joyanne Stephens	Planning, funding and construction of new game studio/classroom/production lab on the Fort Lauderdale campus
Fall 2009	Susan Reilly, Eric Freedman, Borko Furht, Oge Marques, Hari Kalva	Full draft of the Proposal for Degree
Spring 2010	Eric Freedman, Francis McAfee, Stephanie Cunningham, Oge Marques	Search and hiring of new tenure-track faculty in game design/computer animation, Brad Lewter
Spring 2010	Susan Reilly, Eric Freedman, Borko Furht	Completion of the Proposal for Degree

Events Leading to Implementation

Date	Implementation Activity
Fall 2010	Submission of completed proposal to College and University Graduate Program Committees
Fall 2010	Approval of proposal by the Board of Trustees
Spring 2011	Publicity and recruitment for the degree program

VII. Program Quality Indicators - Reviews and Accreditation

Identify program reviews, accreditation visits, or internal reviews for any university degree programs related to the proposed program, especially any within the same academic unit. List all recommendations and summarize the institution's progress in implementing the recommendations.

The program has been drafted by the directors of both the School of Communication and Multimedia Studies and the Department of Computer Science and Engineering, with a full review of other statewide programs, and additional data drawn from other national programs, including Arizona State University, the only comparable degree.

On its most recent review of the College of Engineering and Computer Science, the Accreditation Board of Engineering and Technology (ABET) assessment of the College programs, including programs offered by the Department of Computer Science and Engineering, received favorable comments.

VIII. Curriculum

A. Describe the specific expected student learning outcomes associated with the proposed program. If a bachelor's degree program, include a web link to the Academic Learning Compact or include the document itself as an appendix.

The program is intended to prepare students for creative careers in the emerging field of interactive entertainment. The creation of interactive media requires a combination of skills from the traditional media of film and television as well as a deep understanding of the effects of interactivity upon the quality of experience as well as grounding in the computer sciences to understand hardware build, coding, interface design, and data delivery within multimedia systems. Therefore, we emphasize collaboration across the faculty and programs of Multimedia Studies and Computer Science and Engineering, both in the curricular sequencing and in studio capstones. The fundamental philosophy of the program stresses creativity of expression, experimentation and excellence in execution, as well as innovation in the field of entertainment technologies.

Content Knowledge (Declarative Knowledge): Students will demonstrate knowledge of fundamental concepts in several areas of media and information technologies:

- Familiarity with major developments in the history of multimedia production
- Understanding of varied tactics for new media production
- Understanding of the implementation of technological developments in the public and private sectors
- Critical methods for analyzing animation, interactivity, and new media works
- Critical understanding of interface design and methods
- Ability to engage in self-critiques using the lexicon of new media
- Familiarity with industrial structures and production pipelines
- Knowledge of object-oriented software methodology and methods
- Knowledge of user interfaces, non-functional objectives, and design patterns
- Familiarity with the structures, intelligent use, and the implementation of modern database systems
- Ability to deploy best media management practices, following recent trends
- Ability to map technical skill sets onto a broad range of industry settings, and using a broad range of visualization strategies

Content Knowledge (Technical Skills): Student will demonstrate proficiencies in a number of technical skills, including:

- 2D and 3D Computer animation toolsets
- Interactive, web-based, and mobile media toolsets
- Video production and post-production tools
- Strategies for multimedia integration and content delivery
- Design relational database and perform relational query optimization
- Design and implement network protocols
- Implement and evaluate various software testing techniques

Throughout these efforts, students will demonstrate satisfactory communication skills

in different assignments and will be asked to:

- Produce business and technical documents for class project assignments including business plans, project reports, and others. These documents must be clear, well-written, and follow standard conventions in style, punctuation, grammar, spelling, sentence structure, paragraph formation, and appropriate word choice.
- Participate in teams when completing some of the project assignments. These assignments will have clear collaboration objectives and requirements including coordination and peer reviews.
- Articulate the relationship between one work and the field as a whole, and be able to write and think critically. Students will be engaged with critical methods and be asked to examine and write about the cultural implications of new technologies in the context of communication and cultural theory, addressing contemporary developments in art and industry, relating form and function, aesthetics and intention.

B. Describe the admission standards and graduation requirements for the program.

Applicants will be drawn from a range of fields and should have an undergraduate degree in computer animation, new media, information technology, media arts, computer science and engineering, or a related discipline. Approximately 12 students will be admitted each fall semester; there will be no spring admissions, with the exception of the first year. Applicants must submit a supplemental application and materials to the degree program office. Each application will be carefully evaluated by a panel of degree program faculty, and based on the following criteria: grade point average, transcripts from all colleges and universities, GRE test scores, personal statement, portfolio list, creative work sample, writing sample, and letters of recommendation.

The admission standard will be an undergraduate degree in a related discipline (BA, BFA or BS), a 3.0 undergraduate GPA, and a minimum combined 1000 GRE score. Test scores and grade point average requirements will follow the general admission standards set by the Graduate College. Departure from these minimum standards will be considered based on excellence in the portfolio review.

The faculty panel evaluates applications for originality, clarity, personal insight and artistic excellence. Considerable importance is placed on the personal statement, portfolio list, writing samples and letters of recommendation. The personal statement is an opportunity for the student to express his/her background and interest in the degree program; the statement will be read by the faculty panel as a measure of creativity, self-awareness and vision. The writing sample is used to demonstrate the

candidate's imagination; the candidate must describe an interactive media experience that has inspired him/her to enter the field, outlining the specific qualities that made the experience meaningful. The portfolio list is a record of the applicant's creative material; it should include a concise description of each project, the month and year of completion, and the applicant's creative role and the purpose of the project. The material should give an idea of the range and depth of the candidate's creative ability, and formal recognition such as awards, publication, jobs and exhibitions, should be noted. When listing creative materials prepared for a class or publication, the name of the institution or the publication should be included. The creative work sample is the one item that represents the candidate's best or most relevant work. A minimum of three letters of recommendation from a variety of sources are required; these may be from teachers and industry supervisors.

C. Describe the curricular framework for the proposed program, including number of credit hours and composition of required core courses, restricted electives, unrestricted electives, thesis requirements, and dissertation requirements. Identify the total numbers of semester credit hours for the degree.

The MFA is a two-plus years intensive program that requires 60 credit hours, of which 42 are requirements, 12 are electives, and 6 are thesis. As part of the required coursework, students must complete an advanced interactive project which they design and produce as part of a team.

An overall GPA of at least 3.0 must be maintained in all course work toward the master's degree and a minimum grade of 3.0 must be earned in all required courses. There is project work required each semester, and the degree cannot be completed in less than two years of four full-time semesters.

D. Provide a sequenced course of study for all majors, concentrations, or areas of emphasis within the proposed program.

Year One, First Semester

ART 5685: Advanced Digital Art 1 – 4 credits

DIG 5930: Interactive Multimedia – 3 credits

MMC 6715: Studies in New Media – 3 credits

Elective – 3 credits

Year One, Second Semester

ART 5686: Advanced Digital Art 2 – 4 credits

CNT 6885: Video Communication – 3 credits

DIG 5930: New Media Narrative – 3 credits

Elective – 3 credits

Year Two, First Semester

ART 5690: Advanced Digital Video 1 – 4 credits
 ART 6692C: Creative Workshop in Computer Arts – 4 credits
 COT 5930: Game Programming – 3 credits
 Elective – 3 credits

Year Two, Second Semester

ART 5691: Advanced Digital Video 2 – 4 credits
 ART 6688C: Studio in Computer Arts – 4 credits
 COT 5930: Programming (Special Topic)– 3 credits
 Elective – 3 credits

Master's Thesis – 6 credits

Electives

CAP 6010: Multimedia Systems
 CAP 6018: Multimedia Programming
 CAP 6411: Foundations of Vision
 CNT 6515: Mobile Multimedia
 COT 5930: Computer Animation
 COT 5930: Cutting-edge Web Technologies
 COT 5930: iPhone Programming
 COT 5930: Android Programming
 COT 6930: Visual Information Retrieval
 DIG 5930: Video Game Studies
 DIG 6645: Video Processing
 FIL 6807: Film Theory and Criticism
 FIL 6935: Studies in Film and Television
 RTV 6006: Television and Video Studies

E. Provide a one- or two-sentence description of each required or elective course.

ART 5685: Advanced Digital Art 1 – Teaches the fundamental principles of animation, both computer and classical, including advanced techniques in character animation and dynamic scene design using advanced software. Emphasis on techniques such as keyframes, motion paths, inverse kinematics, procedural animation, and scripting. Includes storyboarding for animation. Students will master the complex interface and toolset of Maya. The course will concentrate primarily on the proficiency of use for the tool, and secondarily on the sharpening of personal skill sets such as modeling and animating. There will be in-depth discussion of the basic methodologies used in all leading 3D modeling packages for a better understanding of how Maya and other 3D applications work internally. Students will be assigned small-scope projects in modeling, animating, texturing, and rigging. Most of the features discussed will be geared towards current game industry use.

ART 5686: Advanced Digital Art 2 – Provides a thorough foundation of 3D modeling, texturing, and rendering techniques for computer animation using advanced software. Emphasis placed on such techniques as 3D curves, patches, meshes, surfaces, B-splines, polygonal tools, digital scene development, computer sculpture, texture mapping, shading and rendering.

ART 5690: Advanced Digital Video 1 – Trends and techniques in digital compositing to combine photographic video imagery with computer-generated animation. Students gain a thorough understanding of matting, keying, transitions, timing, color manipulation, compression and special effects. Advanced animation and related compositing software are used.

ART 5691: Advanced Digital Video 2 – Comprehensive overview of the basics of using digital audio equipment in a studio environment to record and edit audio. Students are introduced to audio systems, audio/video post-production, audio editing and surround-sound mixing using software packages. Sound design theory is covered.

ART 6688C: Studio in Computer Arts – This is a studio class that brings programmers, designers, and digital artists together to work on interdisciplinary projects. The studio may also assist with various client projects if the need and/or opportunity arise. The exact projects that the studio will tackle during any semester will be determined by the current needs of the program and the current skills make-up of the studio members. Artists who wish to join the class must have prior knowledge of 3D modeling, texturing, and/or animation using either the 3D Studio Max or Maya software packages. If only one package is known then a willingness to work with the other on an as-needed basis will be required. Some projects have special pipeline requirements.

ART 6692C: Creative Workshop in Computer Arts – This course will focus on the presentation and analysis of recent developments and applications of Interactive Media Art and Technology; it is also designed to provide students with updates on the latest trends in technology and the opportunity to discuss these. The emphasis is on understanding the production processes involved in making these works and on comprehension of fundamental principles of interactivity in stand-alone, immersive, and networked environments. The objective for these cultural and scholarly intersections is to motivate and inspire students to develop a stronger focus and clearer vision for their careers in the field of interactive media. The course will involve four kinds of activities: 1) presentations by faculty on their current research/art projects; 2) presentations by guest lecturers on their areas of expertise; 3) seminar discussions of relevant readings and topics; and 4) field trips to events and places of interest. The topics that will be addressed include introductions to new and upcoming content platforms, new entertainment software products (such as previews of consumer games and web sites), production tools, current research on new business models and distribution methodologies, as well as current “hot topics” in new media

business and law. The course will also include field trips and site visits to interactive or digital media production facilities.

CAP 6010: Multimedia Systems – Multimedia systems concepts and characteristics. Multimedia compression techniques. Systems architectures for multimedia. Multimedia networking, communications, and synchronization. Multimedia operating systems. Video partitioning and retrieval. Multimedia systems and tools. Wireless multimedia. Multimedia applications. Student projects.

CAP 6018: Multimedia Programming – This is a graduate-level course focusing on software optimization in general and efficient multimedia software and systems development in particular. The course will use a video-coding algorithm and analyze complexity and architecture dependencies. The course will introduce efficient programming techniques including software optimization, SIMD programming, Open MP, DirectShow architecture, and Intel performance tools (Compiler, IPP, VTune). The course will include hands-on software development and performance analysis.

CAP 6411: Foundations of Vision – Study of the interdisciplinary science of vision, combining psychological, neurophysiological, and computational aspects of vision research. Research paper and project topics will be chosen from a list of latest developments in the field.

CNT 6515: Mobile Multimedia – Course covers technologies, tool, and standards for multimedia services over 3G/4G wireless networks. Topics covered include the 3GPP's IP multimedia subsystem (IMS) and video services over IMS.

CNT 6885: Video Communication – Advances in computing and communications technologies have made possible powerful mobile devices with significant computational power. Delivering video services to such mobile devices is a challenging problem that requires research and understanding of the fundamental video communications technologies. This course is designed to provide a comprehensive learning and experience in the area of digital video communications. The course will cover the video coding standards widely used in the industry such as MPEG-2, MPEG-4, and H.264, as well as the communication technologies used to deliver video services such as RTP, video over IP networks, IP TV, video multicasting, and 3G networks with special emphasis on IPTV services.

COT 5930: Game Programming – The main objective of this course is to learn how to build games from scratch. The games will run under Windows and will be written using C# (Visual Studio 2005) and XMA 2.0 from Microsoft. The techniques that we learn can be applied to other applications besides games. These include simulations, instrumentation and educational software, and other software applications that require dynamic high speed interactive displays of graphic objects.

COT 5930: Computer Animation – Course includes basic animation concepts,

principles of animation, storyboarding, character development, animation rendering, and design. Also, 2D animations for use in practical applications are developed. Basic 3D modeling, rendering, animation techniques, and common algorithms used to create computer animation are introduced.

COT 5930: Cutting-edge Web Technologies – To develop hands-on knowledge of the latest web development tools, languages and models. Students will develop projects consisting of innovative Web-based solutions. Topics include: characteristics and foundations of Rich Internet Applications (RIAs), server-side technologies and languages, client-side technologies and languages, usability and human factors, and content sharing tools and technologies.

COT 5930: iPhone Programming – This course is an introduction to software development for the iPhone OS platform. Students will become familiar with the native objective-oriented language used for iPhone OS development, Objective-C, as well as the design patterns necessary to carry out development of iPhone apps. This includes proper Objective-C syntax, defining classes, and proper object-oriented techniques such as abstraction and inheritance. Common design patterns, such as the Model-View-Controller and Delegate patterns, will be discussed as a foundation needed to comprehend and take full advantage of the core objects used in the iPhone Software Development Kit. Finally, we will dive into the vast library that makes up the iPhone SDK, and become familiar with many of the most commonly used APIs that are necessary for great iPhone applications. Throughout the term, we will discuss the theory of what makes a “great” iPhone application, such as proper design considerations, usability, and acceptable performance characteristics. Most of these guidelines are outlined by Apple, and many are required in order to meet the standards necessary to publish to the App Store, and as such, are just as important to an application as the code that drives it.

COT 5930: Android Programming – This course is an introduction to software development for Google’s Android mobile phone. Students will learn programming basics and develop marketable applications, using emulators for application development and real phones for demonstration.

COT 6930: Visual Information Retrieval – Study of the interdisciplinary research area of visual information retrieval. Research paper and project topics will be chosen from a list of latest developments and open challenges and opportunities in the field.

DIG 5930: Interactive Multimedia – Introduction to interactive multimedia production. Class projects explore the potential of interactive media to communicate, express, and challenge cultural ideas. The course seeks to develop a combination of critical, technical, and design skills.

DIG 5930: New Media Narrative – This course explores traditional and alternative storytelling using new media tools and paradigms. The class encourages

experimentation, while developing critical, technical, and design skills. Taking inspiration from film, video, animation, comics, art, and literature, the class creates collaged, multi-perspective, modular, and multi-participant narratives. Students are taught the language of filmmaking and the director's craft as it applies to the digital format. Aspects of mise-en-scene, visual storytelling, continuity-style coverage, temporal and spatial montage theory, directing actors and thinking visually, will be essential to the new media director's palette. All forms of digital filmmaking will be discussed including dramatic, documentary and independent features as well as commercials, music videos and experimental subjects. Through lectures, readings, screenings, web-postings, discussions, writing and production assignments, students will learn the basic principles and vocabulary of film theory and aesthetics. Understanding these fundamental ideas will help students develop a more critical eye towards creating new media.

DIG 5930: Digital Video Editing – An intensive study of the technical and aesthetic elements of nonlinear digital video editing. Students learn strategies for media management, image capture, sequence creation, title creation, working with audio, video effects and compositing.

DIG 5930: Video Game Studies – This course is an overview of the interdisciplinary academic study of video games, with focused attention to the analysis of games as interactive media, as rule-based systems, as cultural and social texts, as designed learning spaces, as arenas of play, and as the products of industrial discourse and design.

DIG 6645: Video Processing – An introduction to the fundamentals of digital video processing. Topics will be chosen from video processing, video compression, organization of video databases, video storage, indexing, and retrieval, video transmission and streaming, and latest developments in digital video technologies. Students will use MATLAB for practical projects.

FIL 6807: Film Theory and Criticism – This course is an overview of the major topics in film theory, and includes structuralist, psychoanalytic, feminist and Marxist approaches to film, as well as debates about realism and authorship. The course surveys both classical and contemporary film theories, and provides a historical perspective on the discipline. This class examines the intersection of film studies with other disciplines, including literature, art and the social sciences.

FIL 6935: Studies in Film and Television: Bodies and Technologies – This course examines the body as a culturally and historically contingent category, a material locus of practices and an object of fashioning and self-identification. With a focus on the mediated body, the emphasis of this course is both the representation of the body (as a discursive subject in film, television and new media) and the impact of various media forms and technologies on physicality and subjectivity—the multiple intersections and points of convergence and conjoinment between bodies and

technologies—where the two may be either systematically re-shaped, fundamentally re-envisioned, or completely absorbed by one another. Subjects to be considered include: the science fiction and horror genres (which may contain specific anxieties about the loss of the body), computer culture and digital imaging technologies (which may present certain utopic narratives about disembodiment), online identity, collective intelligence, gaming and play (all of which give form to the expressive potential of the body), and scientific inquiry (a discourse of mastery, often literalized in medical visualization, and countering the principle of the disembodied subject in the field of new media).

ISM 5930: Internet Application Programming – The purpose of this course is to teach students how to design and develop Web sites at the introductory to intermediate level. This course is project-oriented. Students are required to finish several Internet-based projects using the tools introduced in class.

MMC 6715: Studies in New Media – This course examines the key theoretical works and arguments in the field of new media. Subjects to be considered include: computer culture, digital imaging technologies, interactivity and simulation, digital cinema, digital space, digital media, virtuality, cyberspace, online identity, collective intelligence, and new media communities. This course examines the cultural implications of new technologies in the context of communication and cultural theory. It situates the contemporary representation of and debates about new technologies within an historical context, and examines the utopian and dystopian narratives that have been generated around new technologies throughout history.

RTV 6006: Television and Video Studies – This course is a critical investigation of the history of broadcasting from its beginnings in the nineteenth century imagination to the present. The primary concern is the relationship between broadcasting and the social contexts in which it has been produced and received. The course considers the relationship between art, citizenship, technology and commerce, and reviews critical and practical responses to the broadcast industry as well as new industrial models that reflect contemporary technological trends, new modes of distribution, and new developments in interactive and transmedia narrative.

F. For degree programs in the science and technology disciplines, discuss how industry-driven competencies were identified and incorporated into the curriculum and identify if any industry advisory council exists to provide input for curriculum development and student assessment.

Multimedia Studies has a longstanding Advisory Board of industry partners drawn from various media industries, many of whom joined the undergraduate degree's Board with its inception in 2004; membership will be expanded to match the scope of the new graduate degree and its related technology sectors. Faculty participating in the degree program are members of a number of related professional organizations

including SIGGRAPH and the Society for Cinema and Media Studies, and have been tracking academic and industrial trends in the field.

- G. For all programs, list the specialized accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program if it is available? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.**

The School of Communication and Multimedia Studies has no specific accreditation agency, and follows the policies set forth by SACS. The College of Engineering and Computer Science program was reviewed successfully by the Accreditation Board of Engineering and Technology (ABET) in 2008.

- H. For doctoral programs, list the accreditation agencies and learned societies that would be concerned with corresponding bachelor's or master's programs associated with the proposed program. Are the programs accredited? If not, why?**

Not applicable.

- I. Briefly describe the anticipated delivery system for the proposed program (e.g., traditional delivery on main campus; traditional delivery at branch campuses or centers; or nontraditional delivery such as distance or distributed learning, self-paced instruction, or external degree programs). If the proposed delivery system will require specialized services or greater than normal financial support, include projected costs in Table 2. Provide a narrative describing the feasibility of delivering the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to shared courses, distance/distributed learning technologies, and joint-use facilities for research or internships.**

The proposed program will be delivered traditionally, making use of dedicated facilities on FAU's Boca Raton and Fort Lauderdale campuses. Distance learning and institutional collaboration may be explored at a later date, if additional relevant industry and academic partners are identified and meet the program's guiding mission.

Elective components within the program that are offered through the College of Engineering and Computer Science may be delivered using streaming technology, depending on the delivery method determined by the College of Engineering and Computer Science for specific courses. This delivery will require no additional resources, as the College of Engineering and Computer Science is already using the

Florida Engineering Education Delivery System (FEEDS) to deliver course content to students. In previous years course delivery was supported by video conferencing technology. More recently the College of Engineering and Computer Science has migrated toward offering an increasing number of courses through video streaming technology which allows students to access classes on their own time (i.e., asynchronously). The student convenience that streaming technology provides along with its “richer” medium benefits (video) relative to other forms of online delivery increases the potential market for courses and programs.

As the MFA requires significant lab activities, in-class critiques, and site-specific collaboration, online delivery will only be used to complement the core curriculum where appropriate and only for specific instructional mandates – for instance, connecting the classroom to a site-based industry partner for the purposes of knowledge transfer.

IX. Faculty Participation

- A. Use Table 4 to identify existing and anticipated ranked (not visiting or adjunct) faculty who will participate in the proposed program through Year 5. Include (a) faculty code associated with the source of funding for the position; (b) name; (c) highest degree held; (d) academic discipline or specialization; (e) contract status (tenure, tenure-earning, or multi-year annual [MYA]); (f) contract length in months; and (g) percent of annual effort that will be directed toward the proposed program (instruction, advising, supervising internships and practica, and supervising thesis or dissertation hours).**

See Table 4 for details on the following participating faculty:

Joey Bargsten, Ph.D.	Communication & Multimedia Studies
Shane Eason, M.F.A.	Communication & Multimedia Studies
Thomas Fernandez, Ph.D.	Computer Science and Engineering
Mark Franz, M.F.A.	Communication & Multimedia Studies
Eric Freedman, Ph.D.	Communication & Multimedia Studies
Borko Furht, Ph.D.	Computer Science and Engineering
Hari Kalva, Ph.D.	Computer Science and Engineering
Brad Lewter, M.F.A.	Communication & Multimedia Studies
Oge Marques, Ph.D.	Computer Science and Engineering
Francis McAfee, M.F.A.	Communication & Multimedia Studies
Tami Sorgente, M.S.	Computer Science and Engineering
Ruth von Spalding, M.F.A.	Communication & Multimedia Studies

Table 4 also includes one new faculty hire on a new line (for Academic Year 2012).

B. Use Table 2 to display the costs and associated funding resources for existing and anticipated ranked faculty (as identified in Table 2). Costs for visiting and adjunct faculty should be included in the category of Other Personnel Services (OPS). Provide a narrative summarizing projected costs and funding sources.

In the School of Communication and Multimedia Studies, faculty are already assigned to undergraduate and graduate teaching; therefore, there are minimal costs for allocating percentage of teaching to the MFA. The reallocated base is derived from the percent effort of individual workloads dedicated to the MFA, as translated into a percentage of base salary. Affiliated staff are assigned to the School in general, and are already assisting with related undergraduate and graduate programs, so there is no (or insignificant) adjustment in the allocation of their effort.

In the Department of Computer Science and Engineering, there will be no reallocation of faculty resources; all of the courses listed in the proposed program are regularly offered by the Department. However, a reallocated base is still included to reflect the percent effort of individual workloads dedicated to the MFA.

The Year 5 continuing base (Table 2) reflects an additional instructional line, to begin academic year 2012; this line is dedicated to the teaching and management needs of the program, with an assignment split between instruction and digital content management (managing the student work pipeline and migrating student and faculty-produced content for web-based and mobile delivery). This line does not represent new resources, but will instead be funded through a reallocation of existing OPS funds from both the School of Communication and Multimedia Studies and the Department of Computer Science and Engineering; it will be a joint appointment. Funded after Year 1, this position is reflected in Year 5 costs, but does not show up as a Year 1 base reallocation. This position is counted as “new educational and general revenue” in Table 4, even though it is simply a reallocation of existing revenue, in order to highlight the change in Person Years, which follows the change in FTE.

C. Provide the number of master's theses and/or doctoral dissertations directed, and the number and type of professional publications for each existing faculty member (do not include information for visiting or adjunct faculty).

Faculty Name	Theses	Dissertations	Professional Publications
Joey Bargsten	2	0	2 journal articles; 27 exhibitions
Shane Eason	0	0	25 exhibitions
Thomas Fernandez	0	0	8 journal articles
Mark Franz	0	0	13 exhibitions
Brad Lewter	0	0	5 exhibitions
Eric Freedman	17	6	1 book; 6 book chapters; 10 journal articles; 21 exhibitions
Borko Furht			27 books; 43 book chapters; 49 journal articles

Hari Kalva	4	2	2 books; 7 book chapters; 23 journal articles
Oge Marques			3 books; 10 book chapters; 9 journal articles
Francis McAfee	50	0	3 journal articles; 19 exhibitions
Tami Sorgente	0	0	13 journal articles
Ruth von Spalding	0	0	3 journal articles; 16 exhibitions

D. Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student HC in major or service courses, degrees granted, external funding attracted, as well as qualitative indicators of excellence.

The faculty members in the School of Communication and Multimedia Studies and the Department of Computer Science and Engineering are very active in serving on departmental, college, and university committees. And a number of faculty members (about 50%) serve as editors and referees of scholarly publications, while most are also members of their respective professional organizations. The faculty members in both programs are also very active in publishing books, refereed journal articles and conference papers, and in exhibiting creative work. Both programs have been highly productive in teaching, as evidenced by the data provided below.

School of Communication and Multimedia Studies

Undergraduate productivity

Average numbers of degrees awarded annually (based on five year trends): 200

Annualized Student FTE 2009-2010	359.5	Majors Headcount	1152
Annualized Student FTE 2008-2009	334.4	Majors Headcount	1008
Annualized Student FTE 2007-2008	335.5	Majors Headcount	894
Annualized Student FTE 2006-2007	336.0	Majors Headcount	923
Annualized Student FTE 2005-2006	348.0	Majors Headcount	945

Department of Computer Science and Engineering

Undergraduate productivity

Average numbers of degrees awarded annually (based on five year trends): 100

Annualized Student FTE 2009-2010	193.1	Majors Headcount	838
Annualized Student FTE 2008-2009	178.1	Majors Headcount	566
Annualized Student FTE 2007-2008	161.4	Majors Headcount	535
Annualized Student FTE 2006-2007	169.0	Majors Headcount	570
Annualized Student FTE 2005-2006	163.9	Majors Headcount	630

X. Non-Faculty Resources

- A. Describe library resources currently available to implement and/or sustain the proposed program through Year 5. Provide the total number of volumes and serials available in this discipline and related fields. List major journals that are available to the university's students. Include a signed statement from the Library Director that this subsection and subsection B have been reviewed and approved for all doctoral level proposals.**

The FAU libraries on the Boca Raton and Tower campuses together contain a great number of books and other resources related to the proposed program. The FAU library already holds major subscriptions in areas relevant to the new degree, as it has a history of building collections in film, television, new media, animation, and information technology. The Broward County Library system (which serves as the resource for the Tower campus) also has significant holdings in new media as well as complementary media collections.

The total number of volumes in those fields most closely related to Multimedia Studies (Computer Animation, Computer Science, Film, New Media, Technology, and Television) is 25,336. The total number of serials is 93.

The major journals include:

ACM, Afterimage, American Cinematographer, Animation Magazine, Animation Studies, Camera Obscura, Cineaste, Cinema Journal, Computers and Society, Computers in Entertainment, Continuum, Convergence, eWeek, Film Comment, Film Quarterly, Game Developer, Game Studies, IEEE, InformationWeek, International Journal of Game Theory, International Journal of Gaming and Computer-Mediated Simulations, Journal of Broadcasting and Electronic Media, Journal of E-Media Studies, Journal of Film and Video, Journal of Popular Film and Television, Journal of Visualization and Computer Animation, Jump Cut, Millennium Film Journal, Mobile Computing and Communications Review, New Media and Society, Quarterly Review of Film and Video, Screen, Sight and Sound, Social Text, Television and New Media, Variety, Velvet Light Trap, Virtual Reality, Wide Angle

- B. Describe additional library resources that are needed to implement and/or sustain the program through Year 5. Include projected costs of additional library resources in Table 3.**

None are currently needed.

Library Director

Date

C. Describe classroom, teaching laboratory, research laboratory, office, and other types of space that are necessary and currently available to implement the proposed program through Year 5.

Current classroom and teaching facilities at FAU campuses are sufficient for all courses offered in this program. Facilities that need to be upgraded have been successfully addressed with State instituted Technology Fees as part of the more general academic program at FAU. Facilities that will house the MFA also serve as the curricular facilities for the undergraduate degree in Multimedia Studies, and have been maintained since that program's inception in 2004. The laboratory facilities are housed at the Fort Lauderdale campus, and are under the direction of the School of Communication and Multimedia Studies; these include video production and interactive media labs on the fourth floor of Askew Tower, and computer animation and game studios on the ninth floor. The Department of Computer Science and Engineering already has a full suite of laboratory facilities for its classes on the Boca Raton Campus.

D. Describe additional classroom, teaching laboratory, research laboratory, office, and other space needed to implement and/or maintain the proposed program through Year 5. Include any projected Instruction and Research (I&R) costs of additional space in Table 2. Do not include costs for new construction because that information should be provided in response to X (J) below.

No additional resources are currently needed.

E. Describe specialized equipment that is currently available to implement the proposed program through Year 5. Focus primarily on instructional and research requirements.

The program currently has sufficient equipment, including the necessary hardware and software for research and teaching. These resources include video and audio recording equipment, video capture hardware and software, interactive production tools, animation toolsets, and graphics-intensive computer workstations.

F. Describe additional specialized equipment that will be needed to implement and/or sustain the proposed program through Year 5. Include projected costs of additional equipment in Table 2.

IRM is currently addressing general infrastructure needs to manage the data flow on the Fort Lauderdale campus, including lab and wireless interconnectivity, data storage and delivery, and software servers. IRM has been working with the School of

Communication and Multimedia Studies to identify ongoing infrastructure needs, some of which are funded by IRM and others through Technology Fees.

- G. Describe any additional special categories of resources needed to implement the program through Year 5 (access to proprietary research facilities, specialized services, extended travel, etc.). Include projected costs of special resources in Table 2.**

No additional resources are needed.

- H. Describe fellowships, scholarships, and graduate assistantships to be allocated to the proposed program through Year 5. Include the projected costs in Table 2.**

The program already has two graduate assistantships assigned by the College of Arts and Letters; these are currently sufficient. However, the program will pursue additional funding for graduate assistantships and scholarships as they are warranted by realized enrollment targets.

- I. Describe currently available sites for internship and practicum experiences, if appropriate to the program. Describe plans to seek additional sites in Years 1 through 5.**

The School of Communication and Multimedia Studies has a longstanding and quite vigorous internship program for its undergraduate students (COM 3945: Communication Internship), which includes partnerships with a wide range of media industries in south Florida. These opportunities will be developed for incoming MFA students, not as part of their required coursework, but as elective opportunities for further applied research and skills development, as well as long-term career placement when relevant.

- J. If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's fixed capital outlay priority list. Table 2 includes only Instruction and Research (I&R) costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in narrative form below. It is expected that high enrollment programs in particular would necessitate increased costs in non-I&R activities.**

No new capital expenditure is required.

**TABLE 1-B
PROJECTED HEADCOUNT FROM POTENTIAL SOURCES
(Graduate Degree Program)**

Source of Students (Non-duplicated headcount in any given year)*	Year 1		Year 2		Year 3		Year 4		Year 5	
	HC	FTE								
Individuals drawn from agencies/industries in your service area (e.g., older returning students)	2	1.88	4	3.75	4	3.75	4	3.75	4	3.75
Students who transfer from other graduate programs within the university**	4	3.75	4	3.75	0	0.00	0	0.00	0	0.00
Individuals who have recently graduated from preceding degree programs at this university	4	3.75	8	7.50	8	7.50	8	7.50	8	7.50
Individuals who graduated from preceding degree programs at other Florida public universities	2	1.88	6	5.62	8	7.50	8	7.50	8	7.50
Individuals who graduated from preceding degree programs at non-public Florida institutions	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Additional in-state residents***	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Additional out-of-state residents***	0	0.00	2	1.88	4	3.75	4	3.75	4	3.75
Additional foreign residents***	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Other (Explain)***	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Totals	12	11.26	24	22.50	24	22.50	24	22.50	24	22.50

- * List projected yearly cumulative ENROLLMENTS instead of admissions
- ** If numbers appear in this category, they should go DOWN in later years.
- *** Do not include individuals counted in any PRIOR category in a given COLUMN.

**TABLE 2
PROJECTED COSTS AND FUNDING SOURCES**

Instruction & Research Costs (non-cumulative)	Year 1						Year 5				
	Funding Source					Subtotal E&G and C&G	Funding Source				Subtotal E&G and C&G
	Reallocated Base* (E&G)	Enrollment Growth (E&G)	Other New Recurring (E&G)	New Non-Recurring (E&G)	Contracts & Grants (C&G)		Continuing Base** (E&G)	New Enrollment Growth (E&G)	Other*** (E&G)	Contracts & Grants (C&G)	
Faculty Salaries and Benefits	124,006	0	0	0	0	\$124,006	161,505	0	0	0	\$161,505
A & P Salaries and Benefits	0	0	0	0	0	\$0	0	0	0	0	\$0
USPS Salaries and Benefits	0	0	0	0	0	\$0	0	0	0	0	\$0
Other Personnel Services	0	0	0	0	0	\$0	0	0	0	0	\$0
Assistantships & Fellowships	0	0	0	0	0	\$0	0	0	0	0	\$0
Library	0	0	0	0	0	\$0	0	0	0	0	\$0
Expenses	0	0	0	0	0	\$0	0	0	0	0	\$0
Operating Capital Outlay	0	0	0	0	0	\$0	0	0	0	0	\$0
Special Categories	0	0	0	0	0	\$0	0	0	0	0	\$0
Total Costs	\$124,006	\$0	\$0	\$0	\$0	\$124,006	\$161,505	\$0	\$0	\$0	\$161,505

*Identify reallocation sources in Table 3.

**Includes recurring E&G funded costs ("reallocated base," "enrollment growth," and "other new recurring") from Years 1-4 that continue into Year 5.

***Identify if non-recurring.

Faculty and Staff Summary

Total Positions (person-years)	Year 1	Year 5
Faculty	1.41	1.97
A & P	0	0
USPS	0	0

**Calculated Cost per Student
FTE**

	Year 1	Year 5
Total E&G Funding	\$124,006	\$161,505
Annual Student FTE	11.26	22.50
E&G Cost per FTE	\$11,013	\$7178

**TABLE 4
ANTICIPATED FACULTY PARTICIPATION**

Faculty Code	Faculty Name or "New Hire" Highest Degree Held Academic Discipline or Speciality	Rank	Contract Status	Initial Date for Participation in Program	Mos. Contract Year 1	FTE Year 1	% Effort for Prg. Year 1	PY Year 1	Mos. Contract Year 5	FTE Year 5	% Effort for Prg. Year 5	PY Year 5
A	Joey Bargsten, Ph.D. Multimedia Studies	Assistant	Tenure Earning	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Shane Eason, MFA Multimedia Studies	Instructor	MYA	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Thomas Fernandez, Ph.D. Computer Science/Engineering	Instructor	MYA	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Mark Franz, MFA Multimedia Studies	Assistant	Tenure Earning	2011	9	1.00	25.00	0.18	9	1.00	25.00	0.18
A	Eric Freedman, Ph.D. Multimedia Studies	Associate	Tenure	2011	9	1.00	25.00	0.18	9	1.00	25.00	0.18
A	Borko Furht, Ph.D. Computer Science/Engineering	Professor	Tenure	2011	12	1.00	6.25	0.06	12	1.00	6.25	0.06
A	Hari Kalva, Ph.D. Computer Science/Engineering	Associate	Tenure	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Oge Marques, Ph.D. Computer Science/Engineering	Associate	Tenure	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Francis McAfee, MFA Multimedia Studies	Associate	Tenure	2011	9	1.00	25.00	0.18	9	1.00	25.00	0.18
A	Tami Sorgente, MS Computer Science/Engineering	Instructor	MYA	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Ruth von Spalding, MFA Multimedia Studies	Instructor	MYA	2011	9	1.00	12.50	0.09	9	1.00	12.50	0.09
A	Brad Lewter, MFA Multimedia Studies	Assistant	Tenure Earning	2011	9	1.00	25.00	0.18	9	1.00	25.00	0.18
C	New Hire Multimedia Studies	Instructor	MYA	2012	0	0.00	0.00	0.00	9	1.00	75.00	0.56
	Total Person-Years (PY)							1.41				1.97

Faculty Code		Source of Funding	PY Workload by Budget Classification			
			Year 1	Year 5		
A	Existing faculty on a regular line	Current Education & General Revenue	1.41	1.41		
B	New faculty to be hired on a vacant line	Current Education & General Revenue	0.00	0.00		
C	New faculty to be hired on a new line	New Education & General Revenue	0.00	0.56		
D	Existing faculty hired on contracts/grants	Contracts/Grants	0.00	0.00		
E	New faculty to be hired on contracts/grants	Contracts/Grants	0.00	0.00		
Overall Totals for			Year 1	1.41	Year 5	1.97

