UNC | SCHOOL OF MEDIA AND JOURNALISM

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

CARROLL HALL
CAMPUS BOX 3365
CHAPEL HILL, NC 27599-3365

T 919.962.1204
F 919.962.0620
mejo.unc.edu

To: Administrative Boards
         UNC College of Arts and Science

From: Susan King, Dean, School of Media and Journalism

RE: Interactive Media B.A. Degree Program

September 27, 2015

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For the past 18 months Assistant Professor Steven King has worked with colleagues in the computer science program of the College to create a joint program that would offer undergraduates a B.A. Degree in Interactive Media.

In this time of digital change and innovation in information and news, we are finding the great research universities where there are schools of media and journalism are creating interdisciplinary programs that can accelerate the change needed to keep media robust and sustainable in strong democracies. The technological advances in computer science combined with the ethic and skills involved in journalism, offer students a strong basis for pushing the envelope of change in media.

In the fall of 2014, three of our recent graduates who worked closely with Steven King were hired by the Wall Street Journal to

invent tomorrow's news products. We call these students journalist developers. They are students schooled in the skills of storytelling and trained in computer science skills, a combination that jumpstarts the ability to develop new digital programs. I believe the exposure to both of our disciplines is necessary to leapfrog across the barriers of current media and invent new ways of sharing information and informing the public.

Our informal relationship with professors in computer science have led to stronger interdisciplinary groups of students who can bolster their learning with peer interaction. Our students in both schools have benefitted. We intend to develop a highly articulated program that will outline a course of study that will advance students from both schools and that will benefit both of our programs.

This collaborative, cross-school joint program model has been a touchstone at our school. We currently have a joint masters and doctorate degree with the School of Law. We are in our first year of a 5-year program with environmental studies to produce students with a M.A. in environmental studies and communication. Many of our students double major and we believe strongly that students need both substance and skills to become leaders in this changing communications world.

I strongly support Professor King's collaborative work and his plans to create this innovative graduate opportunity.

APPENDIX A

UNIVERSITY OF NORTH CAROLINA

**REQUEST FOR AUTHORIZATION TO PLAN
A NEW DEGREE PROGRAM**

THE PURPOSE OF ACADEMIC PROGRAM PLANNING: Planning a new academic degree program provides an opportunity for an institution to make the case for need and demand and for its ability to offer a quality program. The notification and planning activity to follow do not guarantee that authorization to establish will be granted.

Date: ____July 30, 2015_____

Constituent Institution: University of North Carolina at Chapel Hill_____

CIP Discipline Specialty Title: Interactive Media Programming
_____

CIP Discipline Specialty Number: __09.0401__ Level: B _X_ M ____ Res. Doc. ____ Prof. Doc. ____

Exact Title of the Proposed Program: Bachelor of Arts in Interactive Media Programming
_____

Exact Degree Abbreviation (e.g., B.S., B.A., M.A., M.S., Ed.D., Ph.D.):
B.A._____

Does the proposed program constitute a substantive change as defined by SACS?   Yes ____
No _X_

> The current SACS Substantive Change Policy Statement may be viewed at:
> *http://www.sacscoc.org/pdf/081705/Substantive%20Change%20policy.pdf*

If yes, please briefly explain.

Proposed date to enroll first students in degree program: *Month* __August___ *Year* ___2017__

1.   Provide a summary of the status of this proposal in your campus review processes.

a.   List the campus bodies that reviewed and commented on this Appendix A proposal before submission to UNC General Administration.   What were their determinations? Include any votes, if applicable.

The School of Media and Journalism is proposing a new B.A. in Interactive Media Programming. The new degree will draw from existing courses offered by the School as well as

courses offered by the Department of Computer Science. This proposed major was unanimously approved by the faculty of the School of Journalism and Mass Communication, now the School of Media and Journalism, in August 2014. We are now seeking approval from UNC-Chapel Hill.

   b. Summarize any issues, concerns or opposition raised throughout the campus process and comment periods. Describe revisions made to address areas of concern.

  The School of Media and Journalism has met several times with the leadership at the Department of Computer Science and has obtained its support of the new degree. The chair of computer science, Dr. Kevin Jeffay, has reviewed this application. His one concern was the growth in his department in recent years and the ability to handle additional students. We believe that most of the students who would major in this program are already majoring in computer science or multimedia. Nevertheless, this proposal recommends the addition of a new faculty member in both the School of Media and Journalism and the Department of Computer Science.

  2. Describe the proposed new degree program. The description should include:

   a. A brief description of the program and a statement of educational objectives;

  The rapidly changing media landscape requires new ways to tell stories and present information that requires a new type of storyteller. Critical problem solving skills using computer and data science techniques are vital to better reporting and innovating new media technologies. The Bachelor of Arts in Interactive Media Programing in the School of Media and Journalism will teach undergraduate students the concepts, skills and techniques needed to create, innovate and lead in the changing industry.

  The Bachelor of Arts in Interactive Media Programing combines specific concepts and skills from Computer Science with design, journalism and ethical storytelling. This degree will be the only such program in the UNC system, and the only such undergraduate program at any university on the East Coast.

  The School of Media and Journalism's goal, in conjunction with the Department of Computer Science, is to create an undergraduate degree that offers a rigorous and unique curriculum, enabling potential journalists and other potential communication professionals to address the growing need of developer storytellers.

  The program will prepare undergraduate students for positions primarily as developer journalists or data visualization developers for positions throughout journalism and the larger media industry.

The new program will create a path for students interested in enrolling in both journalism and computer science that previously didn't exist and take advantage of the strengths of both programs. The few students that double majored or took classes in both schools only took whatever additional classes they can fit in their schedule. This new program helps standardize the most important classes and streamlines access to them and would increase the number of students involved in this applied science and journalism program.   The Department of Computer Science and the School of Media and Journalism are considered among the top programs in the country in their respective fields, and both emphasize practical knowledge as well as theoretical thinking.

The Department of Computer Science will provide important understanding of computer programing concepts, computer assisted problem solving and system architecture while the School of Media and Journalism will provide training in visual presentation and design data-driven storytelling and media innovation and entrepreneurship.

This degree evolves the current Multimedia program in the School of Media and Journalism that has led the industry in placing developer-journalists throughout top industry roles by expanding the knowledge of the students to the changing needs of the evolving industry.

The School sees this degree as a means of addressing a need in the field of mass communication. Journalists and communicators with an understanding of computer programing concepts are valued employees in today's media world. The School expects that the enrollees in the program will come from its students as well as students from Computer Science.

UNC-Chapel Hill is an ideal place for such a program. Both the School of Media and Journalism and the Department of Computer Science have high reputations in their respective industries and have a history of strong collaboration on previous projects and research.

The new degree is 48 hours comprising four components and one project-driven course. The 48 hours is comparable to the maximum hours of other majors in the School of Media and Journalism. The new degree requires a minimum of 39 hours, also comparable to other majors at the School of Media and Journalism.

The educational objectives of the program are to prepare journalism students with the ability to code, problem solved using computer science concepts, understand, investigate and be able to discover insights in big data and produce journalism so that they can obtain top-level jobs in media companies that require both skills. This program would also teach students concepts in human-centered design and media entrepreneurship while teaching a broader group of students in both schools how to better communicate among computer engineers and storytellers.

The proposed major courses would be:

Journalism Core Classes (15 hours) *Students gain important storytelling, reporting, legal and ethical skills.*

JOMC 153 Writing and Reporting (3) A laboratory course that teaches journalistic skills essential to writing across platforms. Practice in using news gathering tools, such as sourcing and interviewing techniques; writing stories, including leads, organization, quotes and data; editing for grammar, punctuation, brevity, style and accuracy; and critical thinking about news values and audiences.

JOMC 141 Media Ethics (3) Explore what constitutes ethical practices, what interferes with ethical practices, and what emerging ethical issues may challenge the newest generation of professional communicators. Cases involve print, broadcast and Internet news media; photojournalism; graphic design; public relations; and advertising.

JOMC 221 Audio Video Information Gathering (3) Prerequisite, JOMC 153. Introduces students to the tools and skills needed to engage in quality news-oriented storytelling with audio, video and multimedia. Students will learn to deliver news stories using multiple platforms, taking advantage of the strengths of each.

JOMC 253 Introduction to Public Affairs Reporting (3) Prerequisite, JOMC 153. Exercises in news gathering, interviewing, and writing news.

JOMC 340 Introduction to Media Law (3) Prerequisite, JOMC 153. Introduces speech and press freedoms under the First Amendment, and cover topics such as prior restraint, libel, privacy, free press-fair trial, federal regulation of electronic and new media, freedom of information, and international issues. Explores such topics as access to government records and meetings, journalistic privilege and access to courts in depth.

Specialization Core Classes (12 hours) *Students learn visual and interactive design and development, data-driven storytelling and multimedia presentation.*

JOMC 187 Introduction to Interactive Multimedia (3) Entry-level course in multimedia storytelling that includes modules on theory; the profession; design; content gathering; and editing, programming, publishing, and usability.

JOMC 581 Multimedia Design (3) Prerequisite, JOMC 187. Permission of the instructor for students lacking the prerequisite. Theory and practice of multimedia design with an emphasis on usability, design theory, and evaluative methodologies, including focus groups, survey research, eye-track testing, and search engine optimization.

JOMC 586 Intermediate Multimedia (3) Prerequisite, JOMC 187. Basic programming, graphic design and storytelling for the Web. Students will work in a HTML5, CSS3, and

JavaScript. They will learn how to design, storyboard and script an interactive storytelling project as well as data-driven storytelling. Students will collect and incorporate photos, videos, sound, text, graphics and database information into interactive multimedia presentations.

JOMC 583 Multimedia Programming and Production (3). Prerequisite, JOMC 586. Permission of the school. Advanced course in multimedia programming languages like Python with Django and D3.js that includes designing and building dynamic web applications.

Programing Core Classes (15 hours)
Students learn deeper programing concepts and computer science methods and practices.

COMP 110 Introduction to Programming (3) Introduction to computer use. Approaches to problem solving; algorithms and their design; fundamental programming skills.

COMP 401 Foundation of Programming (3)A first formal course in computer programming required. Advanced programming: Program specifications, preconditions, postconditions, loop invariants. Linear data structures, searching, and sorting. Algorithm paradigms and analysis.

COMP 410 Data Structures (3) Prerequisite, COMP 401. The analysis of data structures and their associated algorithms. Abstract data types, lists, stacks, queues, trees, and graphs. Sorting, searching, hashing.

COMP 426 Advanced WWW Programming (3) Prerequisite, COMP 410. Developing applications for the World Wide Web including both client-side and server-side programming. Emphasis on Model-View-Controller architecture, AJAX, RESTful Web services, and database interaction.

INLS 523: Database Systems I: Introduction to Databases (3) Prerequisite: INLS 261 for undergraduates. Design and implementation of database systems. Semantic modeling, relational database theory, including normalization, query construction, and SQL. Offered fall and spring.

Project Learning Course (3 or 4 hours)
Students gain real-world experience through project-driven class.

Choose 1

COMP 523 Software Engineering Laboratory (4) Prerequisites, COMP 410 and 411 and two or more three-credit COMP courses numbered 426 or higher. Organization and scheduling of software engineering projects, structured programming, and design. Each team designs, codes, and debugs program components and synthesizes them into a tested, documented program product.

JOMC 584.002 Multimedia Design and Production (3) Permission of the instructor. Students work on a semester-long documentary multimedia project that includes photo and video journalists, audio recordists, designers, infographics artists, and programmers. Open by application to students who have completed an advanced course in visual or electronic communication. This section specific for UX and Graphic Designer and Programmers.

SAMPLE ACADEMIC PLAN
Bachelor of Arts (B.A.)
SCHOOL OF MEDIA AND JOURNALISM
INTERACTIVE MEDIA PROGRAM

The Bachelor of Arts in Interactive Media requires a minimum of 120 credit hours, which includes at least 72 hours outside the School of Media and Journalism (at least 65 hours in the College of Arts and Sciences), 15 hours of Journalism Core courses, 12 hours of Interactive Media Core courses, 15 hours of Programming Core courses and 3 or 4 hours of a Project Learning Core course. Students also have an optional choice to take suggested journalism electives (choice of 6) to reach the minimum 120.

Interactive Media Curriculum is minimum of 45-46 hours. Cannot exceed 48 media journalism hours.

First Semester (Fall)		Second Semester (Spring)		Student Action Plan
English Composition or Rhetoric **ENGL 105** (CR, Foundations)	3	Life Science + Lab (PX, Approaches) *ENST 202*	4	▪ Because admission to the major is by application, a student should predeclare multimedia as their intended specialization in the school of media and journalism with an advisor in the Academic Advising Program.
FL Language Level 1 (FL, Foundations) *SPAN 101*	3	FL Language Level 2 (FL, Foundations) *SPAN 102*	3	
Lifetime Fitness (LF, Foundations) *LFIT 104*	1	**HIST 128** (Major) (HS, Approaches) (NA, Connections)	3	▪ First year students can take introductory courses that can count toward the major as well as take courses to satisfy General College requirements: Foundations, Approaches and Connections.
Phys. Life Sciences (PL, Approaches) *PSYC 101*	3	Intro to Programming **COMP 110** (Major, *Programming Core*) (QR, Foundations)	3	
Global Issues and Beyond North Atlantic (GL, BN, Connections) *HIST 140*	3	Philosophical Reasoning (PH, Approaches) *PHIL 101*	3	▪ Meet with an academic advisor in the College of Arts and Sciences.
TOTAL	13	**TOTAL**	16	

Third Semester (Fall)		Fourth Semester (Spring)		Student Action Plan
JOMC 153 (CI, Approaches) (Major, *Journalism Core*) (Prerequisite for JOMC: 221, 253, 340)	3	Media Ethics **JOMC 141** (Major, *Journalism Core*)	3	▪ Fall semester of their sophomore year, multimedia premajors who wish to complete an interactive media major will submit an application to the senior associate dean of undergraduate studies in the school of media and journalism.
Literary Arts & US Diversity (LA, Approaches) (US, Connections) *ENGL 129*	3	Foundations of Programming **COMP 401** (Major, *Programming Core*) (2nd QR, Connections)	3	
FL Language Level 3 (FL, Foundations)	3	**POLI 100** (SS/HS, Approaches) (Major)	3	▪ Admission is based on 3.1 GPA and a completion of least 45 credits hours by the start of their spring semester.
ECON 101 (SS/HS, Approaches) (Major)	3	World before 1750 (WB, Approaches)	3	
Visual and Performing Arts Course (VP,	3	Elective Course chosen from Arts	3	▪ Students will continue to take prerequisite and major courses as well as courses to complete

Approaches)		& Sciences			General College requirements: Foundations, Approaches and Connections.
				▪	Spring semester students are officially in the J-school's Interactive Media Program.
TOTAL	15	**TOTAL**	15	▪	All majors should meet with a J-school advisor.

Fifth Semester (Fall)		Sixth Semester (Spring)		Student Action Plan
Intro to Interactive Media **JOMC 187** (Major, *Interactive Media Core* , Prerequisite to JOMC: 581, 583, 586)	3	Data Structures **COMP 410** (Major, *Programming Core*) (Prerequisite for COMP 523)	3	▪ By their junior year, students are fully immersed in their major courses, intermixed with taking courses outside of media and journalism.
Audio-Video Information Gathering **JOMC 221** (Major, *Journalism Core*)	3	Interactive Multimedia **JOMC 586** (Major, *Interactive Media Core*)	3	▪ Students continue to meet with a J-school advisor, obtaining updated copies of their academic worksheet.
Intro to Media Law **JOMC 340** (Major, *Journalism Core*)	3	**INLS 161 or 461** (Prerequisite for INLS 523)	3	▪ All COMP and INLS courses count in the *at least 72 hours requirement*.
Multimedia Design **JOMC 581** (Major, *Interactive Media Core*)	3	Elective course chosen from any subject area	3	▪ Fall or Spring, take Usage and Grammar test and pass with Score of 70 or above .
Intro to Public Affairs Reporting **JOMC 253** (Major, *Journalism Core*)	3	Elective Course chosen from Arts & Sciences	3	
TOTAL	15	**TOTAL**	15	

Seventh Semester (Fall)		Eighth Semester (Spring)		Student Action Plan
Multimedia Programming and Production **JOMC 583** (Major, *Interactive Media Core*)	3	Intro to Database **INLS 523** (Major, *Programming Core*)	4	
Adv. WWW Programming **COMP 426** (Major, *Programming Core*)	3	**POLI 101** (SS/HS, Approaches) (Major)	3	▪ Senior year, students continue taking course to complete the interactive media program intermixed with optional media elective courses, or other elective courses.
COMP 411 (Prerequisite for COMP 523) (Experiential Education (EE), Connections)	3	**COMP 523** (Major, *Project Learning Core Course*)	3	
Elective Course chosen from Arts & Sciences	3	Optional Elective course chosen from any subject area	3	▪ Meet with a J-school advisor.
Optional Interactive Media Elective *JOMC 349*	3	Optional Interactive Media Elective *JOMC 440*	3	
TOTAL	15	**TOTAL**	16	

Any grade below a C in a *Journalism Core*, *Programming Core*, *Interactive Media Core* or a *Project Learning Core* course cannot count toward the major and the course must be repeated.

> b. The relationship of the proposed new program to the institutional mission;

The proposed major fits into the institution's mission because it serves the people and the economy of North Carolina by providing better trained journalists, who will then be hired and produce better content and websites about important topics that North Carolina residents care about.

People need salient information about their world more than at any other time in the history of the country. Increasingly, it's multimedia journalists – who can report stories and build websites – who are being relied on by media companies to provide that information.

Using the resources of the School of Media and Journalism and the Department of Computer Science, students in this program will develop skills in building websites and other technological ways of delivering information to consumers, as well as learning how to report and write a story.

  c. The relationship of the proposed new program to existing programs at the institution and to the institution's strategic plan; and

  There is currently a multimedia major within the School of Media and Journalism, and there is currently a computer science major within the Department of Computer Sciences and several courses in the school of Information and Library Science. However, students interested in delving more deeply into journalism and programming have found the need to take classes in the other area to complete their area of study and have found that difficult because they are not majors in the other program. This new major would allow those students to complete their studies more easily. In addition to streamlining access this also opens more avenues for collaboration among the three respective schools and enables students to work on projects with students and professors with specific skills in the respective but more and more related disciplines. For example, the capstone classes are ideal for multi-discipline and multi-school interaction and collaboration between groups of students from all three schools and respective professors.

  d. Special features or conditions that make the institution a desirable, unique, or cost effective place to initiate such a degree program.

  UNC-Chapel Hill boasts both a top-tier computer science program and an internationally renowned journalism school, making the institution uniquely qualified to offer this cutting-edge degree. Both programs already have in place the courses and the faculty needed to implement this major. We anticipate only needing to hire one new faculty member in both the Department of Computer Science and the School of Media and Journalism for this new major, primarily due to the anticipated demand. In addition, the geographic proximity between the computer science department and the School of Media and Journalism is ideal for collaboration. The buildings housing the two programs are less than 50 yards apart from each other on the north part of campus.

  3. Provide documentation of student demand. Discuss the extent to which students will be drawn from a pool of students not previously served by the institution. Evidence of student demand should reflect likely applicant pools (local, regional, statewide, national, or global) and could include:

  a. Surveys of potential enrollees (such as students or alumni of feeder programs, community college enrollees, etc.).

  Numerous current multimedia students, have expressed need for further computer science and data skills and several have expressed interested in being the first students in this new program. We have also had first and second year computer science students contact the journalism school professors having heard about this program and also want to major in Interactive Media Programing.

At a recent NICAR (National Institute of Computer Assisted Reporting) conference, participants were eager to hear about the potential program, and one professional said, "Are you sure you will be able to handle the number of students that will be coming your way?"

The School of Media and Journalism will house the joint major. It already attracts undergraduate students from across the country. While UNC-Chapel Hill receives 18 percent of its undergraduates from outside of North Carolina, the Media School receives 25 percent of its undergraduate students from outside the state. As one of the first, if not the first, programs of its kind, we anticipate that the B.A. in Interactive Media Programming will attract students from North Carolina and across the country.

> b. Enrollment data from existing minor, concentration or certificate programs on your campus.

There is currently no such minor, concentration or certificate program on our campus. The multimedia program within the School of Media and Journalism had 24 majors during the Spring 2014 semester. In that specialization, students learn to create informative and engaging interactive experiences through new technologies. Projects and applications integrate all media forms, text, audio, video, graphics and data. Students and faculty members embrace the power of code-based problem solving to improve storytelling and to create visual packages that allow users to interact and personalize information. This new major will expand that training with more coding courses.

> c. Enrollment data from similar programs in UNC, the state, or country.

We are certain that no similar major exists in the UNC system or in North Carolina. Among the most well-known journalism schools in the country, there is currently no similar undergraduate program in interactive media programming. Many have one or two classes or co-listed classes but not a degree program. We consider our peer institutions in this area to include the University of Florida, the University of Missouri, Western Kentucky University, Cal-Berkeley, the University of Maryland and Indiana University.

In the country, there are similar programs, but each lacks a key ingredient found in the proposed UNC major:

1. **Bachelor of Arts in Interactive Media at the University of South California**. The Bachelor of Arts in Interactive Entertainment is granted through the College of Letters, Arts and Sciences in conjunction with the School of Cinematic Arts. Students study within a framework which combines a broad liberal arts background with specialization in a profession. Major courses are selected from the curriculum of the School of Cinematic Arts. The degree requires a minimum of 48 units in the major. - See more at: http://cinema.usc.edu/degrees/undergraduate/interactive/#sthash.4gyy2gYm.dpuf. This program is different than our proposed program in that it trains students for the gaming industry, not journalism.

2. **Bachelor of Arts in Interactive Digital Media at Webster University.** The latest applications and digital technology are the focus of an Interactive Digital Media degree at Webster University. Students learn interactive concepts, aesthetic considerations and diverse skills that cover selected computer programs, audio production, and video production and post-production. Interactive Digital Media majors take rigorous courses that teach them to integrate different media into coherent programs that effectively communicate a message -- whether to tell a story, report a news event or experiment with new media. However, this program does not have the coding courses that the UNC major is proposing.

3. **Bachelor of Arts in Interactive Media Studies at Miami of Ohio.** The BA in Interactive Media Studies (IMS) is an interdisciplinary degree designed to provide depth in theory and practice of interactive & digital design, development, innovation, and disruption. Grounded in Miami University's tradition of liberal education, the BA in IMS represents the liberal arts of the 21st Century, providing a foundation in information and digital literacy, from multimedia authorship/critical theory to digital and social media marketing, from app development to code-based art, from game studies to user-experience design, and more. This grounding is then complemented with a focused area of depth in one of many areas of scholarly interest in IMS. Again, this major does not focus on journalism, which we believe is a key asset to the proposed UNC major.

4. **Interactive Media Design at University of Washington-Bothell. Interactive Media Design (IMD)** provides students with an expansive understanding of the processes and methods involved in conceiving, creating, and evaluating technology-mediated experiences. IMD students create media products ranging from video and immersive artworks to web-based and platform-specific apps while working in collaboration with their peers. With its interdisciplinary approach to interaction design and emphasis on studio practice, IMD enables students to develop creative solutions to complex problems. The two-year curriculum, grounded in an intensive cohort-based learning environment, blends academic theory, human-centered design, artistic technique, process management approaches, and methods for gathering and analyzing critical metrics. Again, this program focuses on many non-journalism applications of interactive design. The UNC major will focus exclusively on journalism applications.

5. **Dual Master's Degree in Journalism and computer science, Columbia University.** Columbia Journalism School and The Fu Foundation School of Engineering and Applied Science have created a dual-degree Master of Science in Journalism and Computer Science. Students will receive highly specialized training in the digital environment, enabling them to develop technical and editorial skills in all aspects of computer-supported news gathering and digital media production. The goal of the program is for its graduates to help redefine journalism in a fast-changing digital media environment. Students will enroll for a total of four semesters at the Journalism and Engineering

schools, learning the fundamentals of reporting and writing while developing a working background in computer science and software design. The major difference between this program and the proposed UNC major is that it is at the master's level, while UNC's is at the undergraduate level.

4.   Provide evidence of societal demand and employability of graduates from as many of the following sources as feasible unless a good reason exists why such evidence cannot be obtained and similar evidence is presented from sources not listed here.

     a.   Labor market information (www.ncworks.gov) – Current and projected industry and occupational data by region and statewide from the NC Department of Commerce. Available data include (but are not limited to):

        (1)   Area, occupation, and industry profiles.

        (2)   NC occupational and employment projections.

There are no projections within North Carolina for journalism programmers. However, we estimate that every newspaper in the state will need to employ a journalism programmer within the next decade. There are more than 300 daily newspapers in the state. In addition, other media organizations such as television stations and websites will also begin to seek journalism programmers.

        (3)   Job postings.

Many journalism job postings now mention coding as a requirement for the position. For example, of the most recent 1000 position posted on JournalismJobs.com, 109 require computer science or coding skills. We anticipate the number of such jobs will increase in the coming years as more newsrooms see the value of developer journalists and media programmers.

        See example job descriptions in appendix.
        (4)   Economic and demographic indicators.

     b.   National occupational and industry projections (http://www.bls.gov/data/) – National, regional and state outlook for occupations, also including wage data.

No such data is available because digital journalism is such a new field.

Here is the nationwide data for journalists:

In May 2012, the median annual wage for reporters and correspondents was $35,870. The median annual wage for broadcast news analysts was $55,380 in May 2012.

Employment of reporters, correspondents, and broadcast news analysts is projected to decline 13 percent from 2012 to 2022. Declining advertising revenue in radio, newspapers, and television will negatively impact the employment growth for these occupations.

However, we believe that employment of *digital journalists* will increase dramatically in the next decade as media companies seek journalists with coding experience to replace reporters and editors without coding skills.

Indeed, the projections are much more optimistic when looking at interactive media designers who develop multimedia Web graphics and animation for electronic devices and user interfaces. They're often employed by advertising, publishing, and design firms. Entry-level interactive media design positions usually require a bachelor's degree.

Required Education	Bachelor's degree in graphic or interactive media design
Projected Job Growth (2012-2022)	7% for all graphic designers*
Median Salary (2014)	$46,000 for print and/or web/interactive designers**

*Sources: *U.S. Bureau of Labor Statistics, **Professional Association for Design*

Interactive Media Designer Salary

According to the U.S. Bureau of Labor Statistics (BLS), graphic designers in general earned a median wage of $44,830 in 2013 (*www.bls.gov*). The Professional Association for Design (AIGA) compiled more detailed graphic designer salary information and reported that print and/or web/interactive designers earned a median annual wage of $46,000 in 2014, whereas design managers were paid $75,000 that same year (*www.aiga.org*). The AIGA also noted that front-end Web interface developers earned a median annual wage of $58,000, and back-end Web programmers made $65,000 in 2014.

Job Duties

Interactive media designers create visual graphics that allow for user participation on various electronic media, such as websites, games, and cell phone applications. Designers determine clients' needs and identify what the designs should communicate. This process may entail conducting research and meeting with clients and creative directors to establish a project's foci. Designers choose the aesthetic elements, such as size, artwork, images, animation, and font, and construct the designs using layout and animation software. They then present the final designs to the clients or directors for approval.

Job Outlook

Graphic designers in general were expected to enjoy a 7 percent employment increase from 2012-2022, according to the BLS. This trend was due in part to a growing demand for designers in advertising, reported the BLS. As design firms moved away from print publishing, the BLS predicted a greater need for designers specializing in animation and Web design to create interactive content for websites, cell phones, and other digital technology mediums.

c.   Wages and employment of graduates in North Carolina – Percentage of graduates of UNC programs employed in North Carolina and wages paid to graduates of UNC programs employed in North Carolina.

Over the last two years, 100 percent of our UNC multimedia graduates are working as developer journalists, interactive journalists, data programmers, interactive graphic artists, user interface developers and data journalists. They are working for national media organizations like Google, The Wall Street Journal, The New York Times and The Washington Post. They are also serving North Carolina at the News and Observer, Chevrolet Observer, NASCAR, WRAL and creative firms and startups in the Triangle area. Their salaries range from $48,000 to $80,000 in North Carolina. In Washington and New York, they range from $72,000 to $85,000 for a starting salary.

We believe that the new major will make students more marketable and demand higher salaries than those listed because they will be able to produce journalism as well as coding.

d.   Wages and employment of graduates nationally when these data becomes available (see http://www.doleta.gov/performance/pfdocs/wris2_status_state_optin.pdf) – Wages paid to graduates of UNC programs employed nationally (North Carolina partnership in WRIS2 forthcoming).

e.   Job-posting analyses.

See above. Digital journalism jobs are increasingly posted on sites such as journalismjobs.com. The McClatchy bureau in Washington, D.C., for example, has posted a dozen multimedia and digital journalism jobs on its website in June and July 2015.

f.   Projections from professional associations or industry reports.
g.
The Pew Research Center for Journalism and Media studied the growth in digital reporting in 2014.

The data Pew Research used to track the shifting job market in news came from several sources. The staffing data for the 30 larger native digital organizations came primarily from interviews—conducted both via phone and email—with representatives of 28 of the 30 organizations. The staffing information for the remaining two outlets came from media accounts. The staffing data from the universe of smaller sites was derived by merging five lists totaling more than 500 digital news organizations.

That figure that was whittled down to 438 when duplicate outlets and sites that were not applicable or about which little data could be found were discarded. The staff numbers for the individual sites came from survey results, information collected by those compiling the lists and staffing levels listed on outlet websites. The job numbers from legacy media outlets came from data compiled by the American Society of Newspaper Editors, Ad Age, the Radio Television Digital News Association and Hofstra University and Pew Research data.

Among the findings in the study:

- **At some of the digital natives, the rate of hiring has been explosive**. Two years ago, BuzzFeed had about a half dozen editorial employees. Now it has at least 170. Three years ago, Bleacher Report had no paid writers; now there are about 50. The rapidly expanding global Vice Media operation has already hired 48 more staffers in the U.S. this year alone. Henry Blodget has plans to increase the Business Insider editorial staff of 70 by 33 percent this year. And startups like First Look Media, Project X and the new FiveThirtyEight blog have thus far hired a total of about 60 editorial staffers in the last few months.

- **Many of the native digital news organizations are small, nonprofit and young.** Of the 438 smaller sites examined, more than half (241) have three full-time staffers or less. It is also clear that the nonprofit business model is an attractive option for many of these outlets. In our sample, slightly more than half of the 402 organizations where we could identify a business status were nonprofits (204.) And many of them are very new. Nearly 30% (120) of the smaller outlets for which we have starting dates have come into existence since 2010. Fully 85% were started since 2005.

- **Many of the smaller digital organizations focus on filling reporting gaps in local news and investigative journalism.** Among the smaller organizations studied, more than half (231) identify themselves as primarily local or hyperlocal outlets—often covering events at the neighborhood level. Nearly four dozen (45) identify themselves as investigative in nature. In addition, several of the largest nonprofits—ProPublica, the Center for Public Integrity and the Center for Investigative Reporting—produce investigative journalism, often in collaboration with legacy news organizations.

- **Among the larger digital outlets, a number are investing substantially in global coverage.** The editorial focus of the 30 larger sites ranges from sports (Bleacher Report) to tech (Re/Code) to investigative (ProPublica.) But some of the general interest outlets are expanding overseas in a significant way: The Huffington Post wants to grow its reach

to 15 countries from 11 this year; Vice has 35 overseas bureaus; BuzzFeed hired a foreign editor to oversee its expansion into such places as Mumbai, Mexico City, Berlin and Tokyo. The two-year old business-oriented Quartz has reporters in London, Bangkok and Hong Kong and its editorial staff speaks 19 languages.

- **Digital news organizations are hiring a mix of legacy and non-legacy journalists, with a clear emphasis on new storytelling skills.** One area where legacy skills are in demand is investigative work. The Investigative News Network estimates that at least 80% of the journalists working at its 92 outlets are from legacy jobs. At ProPublica, 25 of its 41 staffers are legacy transfers. But increasingly, editors of digital natives say they are hiring younger staffers with better digital instincts and skills. "The training of traditional journalism is not perfectly suited to what digital audiences are looking to read," says Quartz editor-in-chief Kevin Delaney.

    h.   Data concerning employment and wages for graduates of a particular program area from the UNC alumni survey when this survey and data become available.

The starting salaries of UNC graduates in multimedia range from $48,000 to $80,000 in North Carolina. In Washington and New York, they range from $72,000 to $85,000 for a starting salary. We expect those starting salaries to rise as we produce more graduates with coding and journalism skills.

    5.   List all other public and private institutions of higher education in North Carolina currently operating programs similar to the proposed new degree program, including their mode of delivery.

    a.   Show a four-year history of enrollments and degrees awarded in similar programs offered at other UNC institutions (using the format below for each institution with a similar program); describe what was learned in consultation with each program regarding their experience with student demand and job placement. Indicate how their experiences influenced your enrollment projections.

Institution: NONE _____

Program Title: NONE _____

	(year)	(year)	(year)	(year)
Enrollment	N/A	N/A	N/A	N/A
Degrees-awarded	N/A	N/A	N/A	N/A

b.   Identify opportunities for collaboration with institutions offering related degrees and discuss what steps have been or will be taken to actively pursue those opportunities where appropriate and advantageous.

There might be opportunities to collaborate with North Carolina State University. However, we feel that the computer science department here on the UNC-Chapel Hill campus is more than sufficient in terms of a collaboration partner.

There is also the opportunity in the future to offer the program to journalism students at other UNC system schools. We have yet to explore this possibility as we would like to get the program started first.

c.   Present evidence that establishment of this program would not create unnecessary program duplication.

There is no such program – undergraduate or master's – within the state of North Carolina. A Google search for "interactive media" degree programs found less than a half-dozen nationwide.

6.   Are there plans to offer all or a portion of this program to students off-campus or online? If so,
a.   Briefly describe these plans, including sites and method(s) of delivering instruction.

We currently have no plans to offer portions of this program off-campus or online.

b.   Indicate any similar programs being offered off-campus or online in North Carolina by other institutions (public or private).

N/A

c.   What is the estimated percentage of courses in the degree program that will be offered/available off-campus or online: ___N/A_____

d.   Estimate the number of off-campus or online students that would be enrolled in the first and fourth years of the program:

        First Year Full-Time __N/A_____ Part-Time __N/A____

        Fourth Year Full-Time _N/A_____ Part-Time _N/A_____

        Note: If a degree program has not been approved by the Board of Governors, its approval for alternative, online, or distance delivery is conditioned upon BOG program approval. (400.1.1[R], page 3)

7.	Estimate the total number of students that would be enrolled in the program during the <u>first</u> year of operation: *Full-Time* ___10_____ *Part-Time* ____0_____

Estimate the total number of students that would be enrolled in the program during the <u>fourth</u> year of operation: *Full-Time* __25_____ *Part-Time* ___0_____

8.	Will the proposed program require development of any new courses: Yes ____ No__X__

If yes, briefly explain.

9.	Will any of the resources listed below be required to deliver this program? (If yes, please briefly explain in the space below each item, state the estimated new dollars required at steady state after four years, and state the source of the new funding and resources required.)

a.	New Faculty:	Yes__X___ No _____

One new faculty member for both the School of Media and Journalism and the Department of Computer Science, at $75,000 to $100,000 apiece.

b.	Additional Library Resources:	Yes _____ No __X___

c.	Additional Facilities and Equipment:	Yes _____ No __X___

d.	Additional Other Program Support:	Yes _____ No _X____
	(for example, additional administrative staff, new Master's program graduate student assistantships, etc.)

10.	Does the program require enrollment growth funding in order to be implemented and sustained? If so, can the campus implement and sustain the program should enrollment growth funding be unavailable? Letters of commitment should be provided.

The program does not require enrollment growth funding to be implemented. The campus can implement and sustain the program without enrollment growth funding. However, both the School of Media and Journalism and Department of Computer Science believe an additional faculty member in each area would alleviate some of the stress that this new major would place on course space. Computer Science created its BA degree just five years ago and projected no more than 15 to 20 students. It now has more than 80.

11.	For graduate programs only:

Does the program require a tuition differential or program specific fee in order to be implemented and sustained? N/A

      a.   If yes, state the amount of tuition differential or fee being considered, and give a brief justification.

      b.   Can the campus implement and sustain the program if the tuition differential or program fee is not approved? Letters of commitment should be provided.   N/A

12.   For doctoral programs only:

      a.   Describe the research and scholarly infrastructure in place (including faculty) to support the proposed program.   N/A

      b.   Describe the method of financing the proposed new program (including extramural research funding and other sources) and indicate the extent to which additional state funding may be required. N/A

      c.   State the number, amount, and source of proposed graduate student stipends and related tuition benefits that will be required to initiate the program. N/A

13.   List the names, titles, e-mail addresses and telephone numbers of the person(s) responsible for planning the proposed program.

Steven King
Assistant Professor
School of Media and Journalism
Campus Box 3365
UNC-Chapel Hill
Chapel Hill, NC 27599
(919) 843-9939
steven.king@unc.edu

Chris Roush
Senior Associate Dean for Undergraduate Studies
School of Media and Journalism
Campus Box 3365
UNC-Chapel Hill
Chapel Hill, NC 27699
(919) 962-4092
croush@email.unc.edu

Kevin Jeffay
Gillian Cell Distinguished Professor and Department Chair
116 Brooks Building

(919) 590-6238

jeffay@cs.unc.edu

This request for authorization to plan a new program has been reviewed and approved by the appropriate campus committees and authorities.

Chancellor: _____ **Date**:_____

Appendix: Job Descriptions

Here are some recent examples:

    a.   Data Journalist, the Associated Press

The Associated Press is seeking a Newsperson/Data Journalist who combines keen analytical skill, solid coding chops, strong news judgment and a passion for storytelling. This position will be based in any of our domestic bureaus. We're looking for someone who wants to collaborate both with other data journalists on the team and with reporters and editors around the AP and to help us advance our journalism using digital tools and technical skills.

One of the key responsibilities for this position will be to prepare the data sets behind our national stories for distribution to our members and customers and to help them discover their own local stories in the data. Therefore, newsroom experience, particularly working as a lead reporter on national or state-level investigations or data-driven enterprise stories, is important for this role. And the ability to communicate clearly about the results of analyses or the viability of methodological approaches is vital.

We are a small team of enterprising developer-journalists distributed across the U.S., and together we work on a variety of data-rich news projects, from drilling into data sets for AP investigations, to developing engaging news apps for big stories such as the U.S. elections, to building newsroom tools that enhance our beat and breaking-news reporting. We are seeking new ways to tell stories, both in words and in pixels, and the data journalists work closely with graphic artists, designers, video journalists, reporters and editors to find the story in the data and bring it to life across platforms.

The ideal candidate will have experience with data acquisition, management and analysis, as well as visualization techniques for data exploration. We strive to make all of our work easily replicable, so you'll need to be proficient in a scripting language and ready to help us build out our pipeline for data analysis. Experience with Web application frameworks is useful, and If you have worked with mapping tools or experimented with advanced statistical and machine learning techniques, we will want to hear about that, too.

Most importantly we're looking for someone who wants to be part of a team, who can collaborate and communicate with people of varying technical levels. And the one absolute requirement is intellectual curiosity: if you like to pick up new technologies for fun and aren't afraid to throw yourself into research to become the instant in-house expert on a topic, then you're our kind of candidate.

Advanced-level professional competency in written and spoken English language is required. Authorization to work in the United States for any employer is mandatory.

The Associated Press is the essential global news network, delivering fast, unbiased news from every corner of the world to all media platforms and formats. Founded in 1846, AP today is the most trusted source of independent news and information. On any given day, more than half the world's population sees news from AP.

b. Digital producer, Silicon Valley Business Journal

The Digital Producer, digital and social, is responsible for the presentation of Web content and collaborates with the Associate Editor, print, to design and execute the *Silicon Valley Business Journal* social media strategy.

The Digital Producer's duties include day-to-day management and production of online content across multiple platforms and products, including Web, email and mobile. The candidate must thrive in a breaking-news culture and should have demonstrated content programming experience in an online environment. The primary goal of the Digital Producer is to craft timely and compelling products that drive loyal engagement, grow readership and extend the *Business Journal* brand in the digital space. The job requires solid news judgment, strong headline-writing and editing skills, and familiarity with SEO and site metrics. The Digital Producer must balance the highest standards for content with ambitious traffic and engagement objectives.

In addition to working with staff- and user-generated content, the Digital Producer is expected to curate, report, write or edit posts as well as produce interactive features, galleries and video. The end result should be a rich and vibrant digital experience that serves the *Business Journal* readership, generates user feedback and inspires robust community interaction.

The Digital Producer works with other editors in planning and building Web versions of special sections and in editing daily Web articles. The Digital Producer also works with the Managing Editor to relentlessly build audience by planning digital coverage.

Working with the editors and reporters, the Digital Producer will assist in determining how best to extend and expand online articles for print.

To apply for this position, please email a cover letter, resume and work samples to Managing Editor [removed]

REQUIRED EDUCATION, EXPERIENCE, AND SKILLS

- Bachelor's degree or equivalent experience
- 2-3 years experience in online news operation
- Strong headline-writing and copy-editing skills
- Familiarity with AP Style
- SEO experience
- Video production experience a plus
- Demonstrated use of databases to build interactive elements and features also a plus

- Data entry for content management systems
- HTML skills
- Excel and/or spreadsheet tools and management

ESSENTIAL DUTIES AND RESPONSIBILITIES

Duties and Responsibilities, work schedules and/or location may change based on evolving business needs.

- Produce newsy, engaging daily online content
- Generate and execute digital content ideas.
- Track metrics and measure engagement with an eye toward constant improvement.
- Oversee presentation and execution of social media and engagement strategy to build readership.
- Stays abreast of, teaches and implements technical aspects of CMS updates, social media and general Web trends.
- Work with editors, reporters and other stakeholders to plan new content and features.
- Help staff identify and deploy tactics to meet traffic and engagement goals.
- Work collaboratively with peers in design, research, and technology.
- Produce and maintain all market-specific content on the *Business Journal* website, including local promotions, updated staff lists, rate information, editorial calendars. Local content should be updated a minimum of twice a month, with a target of once each week.
- Handle coding and uploading of weekly files to bizjournals.com.
- Gather and upload selected graphics, photos, informational graphics and info boxes to bizjournals.com.
- Regularly participate in and attend Business Journal sponsored events.
- Take on any other assignment made by manager(s).
- Work cooperatively and collaboratively with all colleagues and professionally with sources.

c. Digital Director, Colorado Springs Gazette

The Gazette won the 2014 Pulitzer Prize for National Reporting and is the premier source of news and information for Colorado Springs and the Pikes Peak Region and the second largest newspaper in the state of Colorado. The Gazette has multiple digital and print products including a daily newspaper, monthly magazine, niche websites, a mobile app and social media engagement.

The Gazette is seeking a Digital Director to drive the strategy and development of our digital content initiatives. Our digital businesses include gazette.com, our main news site, and other sites that generate over 6 million page views and 1 million users per month, as well as social media channels, niche websites, a video studio and still-to-be developed niche verticals and projects to attract new audiences and engagement. The successful candidate will be as comfortable with daily news content as with coding, CMSs, chartbeat, google analytics,

newsletter metrics and paywall strategies. Balancing the demands of breaking news with deeper stories and projects to attract a wider audience within budgeted newsroom resources is a must.

The digital director will have a keen sense for content with revenue potential as well as reader engagement and the viral story. An understanding of delivering content and services that are useful to and valued by consumers is paramount. The Digital Director will lead a team of three and be an integral part of the newsroom leadership team as we continue to set expectations for how we deliver news, information and services across a variety of platforms. The digital director also will collaborate with other Gazette divisions, including advertising, marketing, circulation and IT.

Education: Bachelor's degree in Journalism or equivalent experience in digital content development and marketing.

Experience: • At least 5 years work experience in a leadership position in a digital newsroom and/or a content based business required. • Proven record of growing audience, engagement and page views and implementing new technologies and initiatives. • Experience in strategic planning and execution.