



# CompSci+Journalism = Dual Degree

Master of Science degree in Computer Science and Journalism embraces the digital revolution.

**Columbia University's unique and innovative dual-degree program, which accepted its first students in 2011, offers a Master of Science in computer science and journalism. Students 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 refine and create new news gathering and digital media technologies that will redefine journalism as we know it.**

## OVERVIEW

The program offers the highest caliber of computer science and journalism training at Columbia University. The inaugural class of students enrolled in Fall 2011 for a total of five semesters at the Journalism and Engineering schools. Faculty members from both schools advise students and work together, in close collaboration to ensure that the courses are complementary. In addition to taking classes offered at the Journalism and Engineering schools, students attend a seminar and workshop designed specifically for the dual-degree program. The seminar teaches students about the impact of computing on journalism, the emerging role of citizens in the news process, the influence of social media, and the changing

business models that will support newsgathering.

In the workshop, students use a hands-on approach to delve deeply into information design, focusing on how to build a site, section, or application from concept to development, while ensuring that editorial goals are kept uppermost in mind.

## ENGINEERING

At the Fu Foundation School of Engineering and Applied Science, students receive technical training ranging from data mining, to database system design, advanced software engineering, user interface design, computer graphics, security, and networking. Faculty and students work together to create technologies that synthesize raw data into relevant content for news organizations to present in an

attractive, secure, and accessible form for readers.

## JOURNALISM

At the Journalism School, the program is administered by the new Tow Center for Digital Journalism, headed by Emily Bell. The mission of the Center, established in 2010, is to provide students with the skills and knowledge to lead the future of journalism online, and to serve as a center for research in digital media for the industry. Students study the skills, the art, and the ethics of journalism by reporting and writing stories that range from short news pieces to complex narrative features. They learn to think critically and deeply, to be both ethical and street smart, using New York City as their laboratory. 

## Curious, Eager and Resourceful Students Sought

The program seeks applicants who have outstanding undergraduate records, including a background in computer science or extensive mathematics or engineering training, which includes preparation for the required computer science courses. Equally important, applicants should have excellent writing skills and be familiar with the fundamentals of reporting. Candidates must be curious about the world, eager to learn more about particular subject areas, determined and resourceful, and enthusiastic about exploring innovations in journalism.

## Possible Career Paths

### Online Editor/Manager of Information Technology at a large news organization.

Skill set: knowledge of software creation, databases, user interfaces, security, large-scale text processing to engage readers on the web and mobile devices while ensuring content and design meet the standards for quality journalism.


### Data-mining expert for journalistic applications and investigative journalism.

Skill set: knowledge of statistics, machine learning, and advanced language processing techniques, Web search for the purpose of gathering and synthesizing data.

### Entrepreneur/founder of media startup.

Skill set: strong editorial background and knowledge about the business of journalism; basic knowledge of computing with specialization in social media, data mining, and other application areas.

### Web design for news site.

Skill set: knowledge of user interfaces and graphics to inform, entertain, and connect the world through news portals/web sites/mobile devices. 



## Dual-Degree Sample Courses

### **JOURNALISM:**

- Reporting and Writing I
- Journalism essentials: law, business, ethics, and history
- Skills classes in photo, audio, video, and other digitally based media
- Digital Media Workshop
- Digital Media Seminar
- Master's Project

### **COMPUTER SCIENCE:**

- Introduction to Databases
- Programming Languages and Translators
- Advanced Software Engineering
- User Interface Design
- Analysis of Algorithms
- Artificial Intelligence
- Database System Implementation
- Network Security
- Natural Language Processing
- Advanced Database Systems
- Web-Enhanced Information Management
- Intrusion Detection or seminar on anonymity and privacy
- Machine Learning
- Search Engine Technology

## Information and Deadlines

### **A Century of Journalistic Excellence and Innovation**

The Graduate School of Journalism welcomes students from more than 40 countries to the Columbia University campus in New York City every year. Educating new generations of journalists and upholding standards of journalistic excellence has been the mission of the Columbia University Graduate School of Journalism since it opened in 1912. The quality, vitality, and innovation of our degree programs remain unsurpassed, providing the foundation for students not only to succeed, but to shape the future of journalism.

### **One of the Nation's Most Distinguished Schools of Engineering**

As one of the nation's oldest and most distinguished schools of engineering and applied science, Columbia Engineering offers an academic program steeped in

history and committed to innovation. Students learn to think creatively, analytically, and globally—essential skills for today's marketplace that can be applied to all professions, from financial engineering to nanotechnology, from law to medicine to media.

### **Financial Assistance for Students**

Columbia University offers financial assistance to students who demonstrate excellent academic achievement, financial need, and exceptional promise. We work with each student to ease the cost of attendance through a combination of scholarships and need-based programs, including grants and federal and private loans.

### **Top-notch Career Services**

Our Career Services staff works closely with students to help them pursue the most meaningful jobs in the U.S. and abroad. Students meet with a Career Services

counselor for one-on-one consultations throughout the year and may attend any of the dozens of job-hunting strategy sessions held at the University. The students in this program will have unparalleled access to thousands of alumni from both schools, at companies of all sizes around the world. [u260a](#)

### **Application Deadline**

January 15, 2012  
[www.journalism.columbia.edu/apply](http://www.journalism.columbia.edu/apply)

### **Contact Our Admissions Offices**

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