

CDCF 2012-2013 Funded Proposals

A New Curriculum for the Global Humanities: “What are the Humanities? How Do the Humanities Help Us to Think About the World”?

G. Gabrielle Starr, Acting Dean, CAS; Professor of English, Faculty of Arts and Science
Jane Tylus, Professor of Italian Studies and Comparative Literature, Faculty of Arts and Science;
Director, The Humanities Initiative at NYU

We are interested in launching the first of a series of new team-taught courses at NYU designed to give faculty and students a vocabulary for thinking “humanistically” through exposure to a wide range of shared methodologies in areas as diverse as art history, ancient literature, film studies, and philosophy. The course will be followed by a series of workshops in which undergraduate students, faculty, and teaching assistants will provide input regarding the development of new content and strategies for humanities-based courses in CAS and at the global sites. Our hope is that our experiences will culminate in a sequence or mini-minor in the “global humanities” that could be offered at Washington Square and tailored to relevant campuses in the global network. We request funding for an assistant to help us with course implementation (fall semester) and planning and transcribing workshops (spring) as well as additional funding for the classes and workshops.

Art and Activism Cross-School Curricular Concentration

Diana Taylor, University Professor, Performance Studies, Tisch, & Spanish, CAS; Hemispheric Institute of Performance and Politics
Stephen Duncombe, Associate Professor, Gallatin School & Department of Media, Culture and Communications, Steinhardt School of Culture, Education, and Human Development

Development of a cross-school graduate curriculum, open to advanced undergraduates, around Art and Activism. Given the rich offerings of theoretical and practice-based courses on art and activism already in place at NYU— across Steinhardt, Gallatin, Tisch, and Arts and Sciences—we propose to map out a coherent curriculum of both core and elective courses that will form a “concentration,” as well as develop the cultural infrastructure necessary for a vibrant learning community to support this curricular concentration.

Biomechanics for Interactive Design

Dustyn Roberts, PE, Ph.D. Candidate, Adjunct Associate Professor, Tisch School of the Arts;
Research Fellow, NYU Poly
Tom Igoe, MPS, Associate Arts Professor, Tisch School of the Arts

We are proposing to revise the second iteration of a graduate course in the Tisch School of the Arts’ Interactive Telecommunications Program entitled *Biomechanics for Interactive Design*. The class will be taught by Professor Dustyn Roberts, a biomedical engineer who conducts research at the intersection of biomechanics, robotics, and open hardware. She will be advised by Professor Tom Igoe, an expert in physical computing – a software and hardware design approach focused on interfacing between the natural and digital worlds. The aim of the course

is to introduce students to the myriad challenges associated with collecting, analyzing, and visualizing data on human movement and energy expenditure and to the kinds of technologies that can be applied to address these challenges. In the extensive, hands-on design component of the course, students will work in small teams to develop their own novel projects to further human movement and energetics research using a problem-based collaborative approach.

Exit Strategy: Framing the Work, Funding the Work

A. Elizabeth Mikesell, Senior Language Lecturer, Expository Writing Program
Deborah Stein, Language Lecturer, Expository Writing Program

This intensive writing course will provide seniors in the Tisch School of the Arts with concrete skills that will help them find (and even create) opportunities for themselves post-graduation. Students will learn to analyze, conceptualize, and contextualize their current and future work, to research funding opportunities; to develop a project proposal; to prepare and distribute work samples; and to convey both their project and process in a way that will be appealing to funders. Final projects will consist of two completed applications and a full portfolio of work.

Lambda Calculator: An Educational Software Application for Formal Semantics

Lucas Champollion, Department of Linguistics, Faculty of Arts and Science

This project proposes to hire a student programmer to upgrade a software program that supports the standard curriculum in semantics. This program is both a classroom aid that helps instructors visualize material; an automatic homework grading system and an interactive calculator that automatically generates feedback in reaction to student mistakes. The current version was co-developed by the author until 2007. Semantics instructors at NYU and worldwide have successfully integrated it into their curricula. The objective of this proposal is to continue development of this program so that it affords more reliability and flexibility to instructors and students, and supports a wider range of applications.

NY Underground: A New Environmental Studies Course Below the City Streets

Katie Schneider, Clinical Assistant Professor, Department of Biology, College of Arts and Science

New York Underground is a new Spring 2013 Environmental Studies (ES) course that is currently designed as a seminar-based course with field trips. Here, I propose to enrich the experiential learning of students enrolled in this course by incorporating inquiry-based field research. Such methods have been shown to be effective in science education, enhancing student confidence, comfort, and understanding of the scientific method. I am requesting funds primarily for small equipment and supplies that can be repeatedly used in this course to sample subterranean habitats underneath NYC. While exploring and investigating biological and environmental questions, students will experience collaborative, cooperative, and problem-based learning strategies. Students will use hands-on approaches to work through all parts of the scientific method, including experimental design, data collection and analyses, and presentation of their findings. Expanding this course to include field methods, with the help of this grant, could also create opportunities for regional and global comparison via repeated standardized data collection at additional NYU sites (e.g. Washington, D.C. and Berlin). Such collaboration between environmental studies students would not only reinforce the goals of the NYU Global Network Initiative, but may also allow for increased scientific understanding of the environmental impact of subterranean infrastructure and inform policy at a global scale.

Resonance Measurement and Ongoing Evaluation in Actors

Brian Gill, Assistant Professor of Vocal Performance, Steinhardt School of Culture, Education, and Human Development

Scott Miller, Associate Arts Professor, Tisch School of the Arts

The investigators will work with students in the Graduate Acting Program to develop a set of exercises to better assess their use of voice through scientific methods of analysis. Building on existing software technology, they will develop a program and associated exercises which allow students to independently practice good vocal use and technique with objective computer feedback. These exercises will then be incorporated into the arc of training within the Graduate Acting Program.

The Use of Next Generation Sequencing Technology as a Tool in the Classroom at New York University

Jane M. Carlton, Professor of Biology and Faculty Director of Genomic Sequencing, Center for Genomics and Systems Biology, Department of Biology, Faculty of Arts and Science

Mark L. Siegal, Associate Professor and Director of Undergraduate Studies, Center for Genomics and Systems Biology, Department of Biology, Faculty of Arts and Science

Ignatius P. Tan, Clinical Associate Professor, Assistant Director of Undergraduate Studies, Department of Biology, Faculty of Arts and Science

Eric D. Brenner, Clinical Assistant Professor, Department of Biology, Faculty of Arts and Science

Manpreet S. Katari, Clinical Assistant Professor, Department of Biology, Faculty of Arts and Science

We propose to introduce for the first time the use of the powerful new technology of “next generation sequencing” (NGS) into three NYU Biology undergraduate and graduate classes (with one cross-listed with NYU’s Master in Public Health). The expected enrollment for the course is ~100 students in the first year, and at least one of the courses is expected to be highly popular for pre-med and health-related programs. NGS has revolutionized the field of biology and has enormous implications for biomedical research. We will introduce the technology as a new module in each course, and use it to engage students in a more collaborative approach to learning through teamwork and joint projects. This approach has started to be introduced in a similar manner at an undergraduate course at NYU Abu Dhabi. The three modules will use a different application of NGS to (1) sequence the genome of a malaria parasite *de novo*; (2) sequence a part of the gene responsible for the ability to taste phenylthiocarbamide in all students taking the class; and (3) identifying DNA variants in different strains of yeast. All of these experiments will take advantage of the Ion Torrent next generation sequencer recently purchased and the Genomics Core staff who can help with running the machine and manipulating the data for the students. We plan to use the logistics, data, and workflows generated with this proposal as preliminary data for future funding, for example through applying for an NIHT32 training grant in genomics for the department of biology. The use of this technology in the NYU classroom is enormously exciting to us, and will prepare NYU students for the paradigm-shifting world of the use of genome sequencing in all areas of biological and biomedical research, while developing the ability of students to understand the scientific method in a team-based environment.