

SIGCSE 2013 – Poster Submission
Prof. Deena Engel, Department of Computer Science, New York University

1. Proposer:

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2. Statement of Topic: A short title.

Embracing the Digital Humanities:

A Course on Computing in the Humanities for Undergraduate Computer Science Minor Students

3. Significance and Relevance of the Topic:

With a research tradition spanning about half a century, humanities computing has become an established academic field, with its own journals, conferences, learned societies, research centres, and support units. Good educational programmes of humanities computing studies would therefore be a legitimate desideratum. (de Smedt)

A review of literature in the Digital Humanities field reveals a number of articles and a great deal of research and work on the topic of pedagogy and specifically, curriculum development within the Digital Humanities. “These studies [reveal that] ... much is still being done to define the teaching programme, and the field: although their focus is mostly (and necessarily) a practical approach to how teaching programmes can be implemented and integrated into academic departments and scholarly frameworks.” (Terras) Case studies highlight projects as a means of teaching humanities computing (Jessop; Malkmus) along with “a range of computational techniques relevant to the humanities in general” (Jessop).

From a computing perspective, it has been noted that “Today virtually all disciplines scientific and non-scientific benefit from the support of computer software to aid their investigations and to convey the results broadly.” (Amoussou). A literature review reveals studies on building successful programming curricula across disciplines (Bills and Canosa); implementing project-based learning (Gülbahar and Tinmaz); the role of Computer Science departments in “connecting across campus” (M. LeBlanc et. al); and other relevant studies. In addition, many departments report successful outcomes with teaching web programming to non-majors (Bloss; Gousie; Hufford; Stepp et al.; Yue and Ding).

Students must fulfill two pre-requisites in order to attend our class including at least one semester-long course in web design (e.g. *CSCI-UA.4 Introduction to Web Design and Computer Principles* or equivalent) and at least one semester of programming in a high-level language such as Python or Java. (Our *CSCI-U.2 Introduction to Programming* is currently taught in Python and our *CSCI-UA.101 Introduction to Computer Science* is taught in Java.)

We strive in our course, *CSCI-UA.380-A Computing in the Humanities and the Arts*, to combine current Computer Science pedagogical trends in teaching web programming to non-majors as well as the general trends towards project-based coursework in order to best meet the needs of humanities and arts students. In this way, we seek to prepare our humanities and arts majors to pursue research in their respective disciplines according to current methodologies in the Digital Humanities.

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This course is to be given for the fourth time during the fall, 2012 semester. The course is project-based. Topics in this course focus on the following subjects and projects: textual analysis by writing programs in Python; a text encoding project using XML and XSLT with adherence to the current Text Encoding Initiative standards (see TEI - <http://www.tei-c.org/index.xml>); building an on-line archive from primary source materials using xHTML/CSS, XML, XSLT and JavaScript; and creating works of software art using Processing (a language based on Java – see <http://processing.org/>). Students are also exposed to current research throughout the Digital Humanities by a series of guest lectures during the semester given by NYU faculty from the departments of English, History, Museum Studies, and Classics.

4. Content: A description of the expected content of the poster.

The poster will contain a full course description and syllabus; screen-shots of student projects which have been posted with student permission to the Computer Science Department webserver and referenced by the NYU Library and Archives (see <http://www.nyu.edu/library/bobst/research/arch/digcomp.htm>) as well as summaries of projects completed and samples from the fall, 2012 semester. Handouts will include a flyer with a course description, URLs for further reference on the course and a bibliography on relevant topics in pedagogy in both Computer Science and in the Digital Humanities.

5. Abstract (Description) [800 characters or less including whitespace]

CSCI-UA.380-1 Computing in the Humanities and the Arts is an undergraduate course in our *Web Programming and Applications Minor* in the Computer Science Department at NYU. This course, offered in the fall 2012 semester for the fourth time, seeks to bring best practices in Computer Science pedagogy to Humanities and Arts majors. Students must have completed at least one semester each in web design and in programming in a high-level language to enroll. The course is project-based, including work on textual analysis using Python; text encoding using XML; building an on-line archive using XML/XSLT and JavaScript; and creating art using Processing/Java. Students are exposed to current research in this field through guest lectures by NYU faculty in areas such as English, History and others.

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