DIG 6836: Design and Development of Texts and Technology

Section 0M01, Course # 90902, 3 credit hours
Fall 2014, Mondays, 6:00-7:15, CNH-203

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Overview

This course will introduce you to some of the digital design and development techniques to be used in the interdisciplinary scholarship of Texts and Technology. Although we will discuss various approaches to T&T, we will focus on the impact of "new media" on our concepts and practices of literacy/electracy, including pedagogical, artistic, workplace, and leisure-based communicative practices. We will also engage with theoretical concepts, such Ramsay's notion of *algorithmic analysis*, as frameworks for thinking about the digital humanities and digital media. In doing so, we will identify and discuss ways to extend, challenge, or reconfigure these theoretical ideas to engage with projects and practices outside of text analysis.

In addition to engaging with theoretical content from a variety of scholars working in T&T-related fields, we will also learn applied programming skills this semester that will aid in our understanding and application of digital theories and methodologies. Specifically, we will learn how to build interactive projects using digital media design, scripting, and web-based development languages. Fundamental to a deep understanding of new media theory and practice is knowledge about the underpinnings of digital computing (especially Web-based technologies). As such, we will be learning and applying foundational techniques in computation such as iteration, conditional logic, randomness, and algorithm design. We will also study how to apply programming techniques for functions such as text parsing, data analysis, repetition, and interactive design. These skills will further aid you as you consider applied digital components for your dissertation or other scholarly projects. As Douglass Rushkoff has famously noted, "If you don't know how the system you are using works, chances are the system is using you." Or, more simply put, "program or be programmed."

The bulk of your "writing" in this course will be done in digital form through interactive projects, although we will have some online writing prompts throughout the semester as well. Additionally, you will write a traditional project proposal for your final project and you will have the opportunity to submit a revised proposal based on feedback from your instructor and peers. For your other major assignments, you will develop your own scholarly digital projects using programming techniques learned in the course. By the end of the course, you should have the knowledge to a) plan and design a workflow for an interactive digital project using functional or object-oriented programming techniques and databases, b) select the appropriate data structures, functions, and/or objects to employ in your project, c) determine the best technical and rhetorical means by which to deploy your project to an audience, and d) document and assess your project within a scholarly context.

We will use a course website to extend our inquiry online, share work with others, and keep track of our collective work. This website will contain copies of our major assignments, example code and tutorials, and links to student projects.

M-Model Course

You will notice that our course is only scheduled to meet in person for one hour and fifteen minutes each week. This is not very much time! Our face-to-face time is shortened on purpose in order to provide you extra time each week to work through the online materials at your own pace. You should be sure to schedule your time appropriately so that you have plenty of time to work through the programming materials, forum postings, and online quizzes.

The weekly programming quizzes and our discussion boards will be deployed on our official Canvas web site (https://webcourses.ucf.edu/courses/1047395). Experienced programmers may substitute an extra project in lieu of weekly programming quizzes, but they must demonstrate proficiency first. Webcourses is additionally available from the "Online Course Tools" of your MyUCF panel. Students are encouraged to make use of the "Questions for the Instructor" forum thread for any questions about assignments or course materials. They can also use the "General Student Discussion" forum thread to interact with classmates. For general help with Webcourses or logging into your account, see http://learn.ucf.edu/.

Course Objectives

- Learn about the diverse scholarly work done in T&T, both theoretical and applied, and form a working definition of this academic area and the practices it can inform.
- Engage in scholarly conversation about the course texts and concepts they take up, in the process improving interpretation, writing, design, and argumentation skills.
- Understand and apply media programming techniques to develop scholarly textual and interactive projects for the World Wide Web and your scholarly portfolios.
- Solve problems using interactive media tools and resources.
- Explore ideas and juxtapositions of critical theory and technology for use in your thesis, your publications, or future project coursework.
- Use new media to better understand and teach the ways these media rearticulate communication forms and processes.

Required Texts

- Bartscherer, Thomas and Roderick Coover (Eds.). *Switching Codes: Thinking Through Digital Technology in the Humanities and the Arts*
- Hayles, N. Katherine. *How We Think: Digital Media and Contemporary Technogenesis*
- Bogost, Ian. *Alien Phenomenology, or What It's Like to Be a Thing*
- Norman, Donald A. *The Design of Future Things*
- O'Gorman, Marcel. *E-Crit: Digital Media, Critical Theory, and the Humanities*
- Ramsay, Stephen. *Reading Machines*

Recommended Text

It is recommended that those students without much/any programming experience pick up a beginner's guide to programming on your preferred language. I recommend the PHP language for beginners, but more advanced programmers should choose a language they are not already familiar with, such as perhaps Ruby or Python. If you already have experience with another programming language or feel comfortable with web scripting and databases, then an additional book is probably not necessary. As a class, we will also read additional selections (available as .pdf files on our WebCourses site) online each week. Technical tutorials using CodeAcademy (www.codeacademy.com) are also assigned for each week.

Assignments and Grading

Major Assignments	Percentage of Overall Grade
1) Online Discussion Posts x 5	15%
2) Weekly Programming Quizzes (or extra project for experienced coders)	20%
3) Digital Project 1 (e.g., Metadata Display System) due 9/22	10%
4) Digital Project 2 (e.g., Interactive Textual Technology) due 11/3	15%
5) Final Project Proposal (including Prototype Mockup & Wireframe) due 9/15	10%
6) Final Digital Project (e.g., T&T Memex Machine) due 12/1	20%
7) Class Participation and Online Interaction	10%

Financial Aid Reporting Policy

As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the end of the first week of classes, or as soon as possible after adding the course, but no later than August 27. Failure to do so will result in a delay in the disbursement of your financial aid. Our "documented" activity will be the digital literacy pre-test available through Webcourses on our official course Web site.

Technology Policy

Outside class, students are required to have access to word processing software and a Mac or PC computer with access to the Internet. During class, students may find use in working with technology to take notes, experiment (during appropriate class discussions), show examples, etc. It is expected that these technologies will not be used during class for purposes outside the scope of discussion, including instant messaging classmates, texting, e-mail, Facebooking, video games (outside of their use as examples to support particular arguments). Please feel free to use any device that makes your participation in class discussions easier. Please do not leave your cell phones on audible ring, and barring emergencies, do not take or make phone calls during class. In other words, be courteous to your instructor and your peers.

Other Course Policies

- I am always happy to meet with you about the course or your larger T&T program of study. If my office hours are not convenient for you, we can certainly schedule alternative times to meet in person or virtually.
- We will mostly follow the syllabus and schedule, but they are subject to minor changes, about which I will apprise you ASAP during normal class meetings or by email.
- In order for the class to be a success, you must be well prepared for and actively engaged in all class meetings. I will take notes about your level of preparation and participation.
- Because this is a discussion-oriented class, attendance and punctuality are crucial. Beyond affecting your participation grade, missing more than one class will result in your overall course grade being lowered. Missing more than two classes will likely cause you to fail the course.
- All UCF students are responsible for upholding standards of academic integrity as explained by The Golden Rule (http://www.ucf.edu/goldenrule). When it amounts to academic dishonesty, plagiarism can have dire consequences such as failing a paper or the entire course.
- Students with disabilities will be accommodated in this course. Please let me know at the beginning of the term about any such needs, and I will make adjustments and help you locate resources to aid your performance in the course.

Tentative Schedule (Always check Webcourses for most up-to-date version)

Week	Date	Topics and Activities	Readings and Assignments Due By Next Meeting
1	August 18	Welcome and Introduction to the Course; Review of Syllabus; Student Introductions Online: HTML/CSS Review (part 1)	❑ Read: Ramsey Chs. 1-3 (p. 1-57) ❑ Read: Introduction to *The Robot Chronicles* by David Simpson ❑ Codeacademy: HTML/CSS (HTML modules) ❑ Take digital literacy quiz (**required to be completed by Friday, 5pm**)
2	August 25	Reading Machines & Algorithms Limitations of Computation Online: HTML/CSS Review (part 2)	❑ Read: Ramsay Chs. 4-6 (p. 58- 89) ❑ Read: Working the Digital Humanities (Chun and Rhody, online) ❑ Codeacademy: HTML/CSS (CSS modules)

3	Sept. 1	No face-to-face meeting (Labor Day) Online: Introduction to PHP and Conditional Statements	❑ Read: O'Gorman p. 1-70 ❑ Read: PDF (see online) ❑ Codecademy: Introduction to PHP ❑ Codecademy: Control Flow: If/Else ❑ Codecademy: Control Flow: Switch
4	Sept. 8	Examplars, Hypericons, and Playing Around with Theory Online: Arrays + GET/POST, input, forms (online supplement)	❑ Read: O'Gorman p. 71-116 ❑ Read: PDF (see online) ❑ **Final Project Proposal due next week** ❑ Codecademy: Arrays ❑ Complete Programming Quiz #1
5	Sept. 15	Nonsense and Play Online: Iteration and Loops **Final Project Proposal due**	❑ Codecademy: For Loops ❑ Codecademy: While Loops ❑ **Digital Project 1 due next week**
6	Sept. 22	**Digital Project 1 Due** **Project Presentations**	❑ Read: *Switching Codes* p. 1-99 ❑ Read: PDF (see online) ❑ Complete Programming Quiz #2
7	Sept. 29	Research & Computation Online: Functions	❑ Read: *Switching Codes* p. 100-198 ❑ Read: PDF (see online) ❑ Codecademy: Functions, Part I
8	Oct. 6	Ontology & The Semantic Web Online: Functions, part II	❑ Read: *Switching Codes* p. 199-313 ❑ Read: PDF (see online) ❑ Codecademy: Functions, Part II ❑ Complete Programming Quiz #3
9	Oct. 13	**Final Project Proposal Peer Reviews** Online: Objects	❑ Read: Bogost p. 1-84 ❑ Read: PDF (see online) ❑ Codecademy: Objects in PHP ❑ **Revised Final Project Proposal due next class**
10	Oct. 20	Theory of Objects Online: Object-Oriented Programming (OOP) **Revised Final Project Proposal due**	❑ Read: Bogost p. 85-136 ❑ Read: PDF (see online) ❑ Codecademy: Object-Oriented PHP ❑ Complete Programming Quiz #4

11	Oct. 27	Theory of Objects, Part II Online: Advanced Arrays	❑ Read: Norman (first half) ❑ Codecademy: Advanced Arrays ❑ **Digital Project 2 due next class**
12	Nov. 3	**Digital Project 2 Due** **Project Presentations**	❑ Read: Norman (second half) ❑ Complete Programming Quiz #5
13	Nov. 10	Psychology and Design Online: MySQL, Part I	❑ Read: Hayles p. 1-79 ❑ Work on final project
14	Nov. 17	The Changing Humanities / How We Read Online: MySQL, Part II	❑ *Read: Hayles p. 171-247 ❑ Work on final project ❑ Complete Programming Quiz #6
15	Nov. 24	Database and Narrative Online: MySQL, Part III	❑ *Read: Hayles p. 81-170 ❑ Work on final project ❑ **Final Project due next week**
16	Dec. 1	**Final Projects Due** **Final Class Party** **Final Project Presentations** *Future of Texts and Technology*	Congratulations on completing the course! Have a great Winter Break.

* Note: we are reading Hayles out of order on these two weeks. This is not a typo!