COURSE OUTLINE

Course Number  
DMA144

Course Title  
Internet Tools and Techniques

Credits  
3

Hours:  
lecture/Lab/Other  
1/4

Co- or Pre-requisite  
none

Implementation  
sem/year  
Fall 2013

Catalog description

Introduction to the tools and techniques used to create blogs, commercial websites and internet applications. Topics include the history of the Internet, Internet software and hardware, the ethical issues surrounding privacy, accessibility and ownership on the Internet, information architecture and content strategies, and the tools used for blogging, creating web pages and rich web applications. Students will research, analyze, diagram and create Internet applications and websites.

Is course New, Revised, or Modified? New

Required texts/other materials:

- Lynda.com
- Access to open labs or specific software & hardware

Revision date:  
November 2012

Course coordinator:  
Sarah Sweeney

Information resources:

W3schools.com
Tv.adobe.com
Lynda.com

Other learning resources:

- Lab assistants are available to work with students who need help
- ES labs have supervised open lab hours every semester so that students do not need to purchase the software
Course Competencies/Goals:

The student will be able to:

- Identify and describe the software and hardware components that form the foundation for the Internet (GE Goal 4, MCCC CS Goal E)
- Collect information to analyze different types of information systems through web analytics, user surveys and usability testing using spreadsheet software (GE Goal 4, MCCC CS Goals D and E)
- Write a brief describing the processes that a specific information systems use to present information using word processing software (GE Goals 1 and 4, MCCC CS Goals A and E)
- Construct diagrams defining the organizational structures of the Internet using presentation software (GE Goal 4, MCCC CS Goal B and E)
- Build interactive systems to present information accessible through the Internet using HTML, CSS, Javascript in addition to image and video editing software (GE Goal 4, MCCC CS Goal B, D and E)
- Describe the importance of historical events in shaping the history of the Internet (GE Goal 7, MCCC CS Goal A)
- Debate the ethical implications of how information is structured and accessed using the Internet (GE Goal 9, MCCC CS Goals A and C)

Course-specific General Education Knowledge Goals and Core Skills.

General Education Knowledge Goals
Goal 1. Communication. Students will communicate effectively in both speech and writing.
Goal 4. Technology. Students will use computer systems or other appropriate forms of technology to achieve
Goal 7. History. Students will understand historical events and movements in World, Western, non-Western or

MCCC Core Skills
Goal A. Written and Oral Communication in English. Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.
Goal B. Critical Thinking and Problem-solving. Students will use critical thinking and problem solving skills in analyzing information.
Goal C. Ethical Decision-Making. Students will recognize, analyze and assess ethical issues and situations.
Goal D. Information Literacy. Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.
Goal E. Computer Literacy. Students will use computers to access, analyze or present information, solve problems, and communicate with others.

Units of study in detail.

Unit I History of the Internet

The student will be able to...
- Describe the evolution of personal weblogs from the online diary to the blog and microblog (CG6)
- Identify key internet-based diarist pioneers and discuss their contributions to their field (CG6)
- Debate the ethical issues introduced through the publication of private information (CG7)
- Describe the history and technological events that produced the World Wide Web (CG6)
- Identify key figures in the creation of the World Wide Web and discuss their contributions to their field (CG6)
• Describe the history and technology of mobile applications (CG7)
• Debate the ethical issues involved in accessibility on the web (CG7)
• Debate the ethical issues involved in intellectual property, copyright and digital patents (CG7)
• Predict the future of the Internet using current trends and events (CG6)

Unit II Technology of the Internet

The student will be able to...
• Identify and describe the hardware and software used for blogging and microblogging (CG1)
• Identify and describe the hardware and software used in commercial websites, including dynamically generated webpages and ecommerce applications (CG1)
• Identify and describe the hardware and software used for social media applications (CG1)
• Identify and describe the hardware and software used in Web 2.0 applications, Web 3.0 applications, and the semantic web (CG1)
• Identify and describe the hardware and software used in podcasting and rich media applications (CG1)

Unit III Researching Internet Information Systems

The student will be able to...
• Collect and analyze information about specific blogs including information about users, types of traffic, types of performance and conversion rates using web analytics and spreadsheet software (CG2)
• Write a brief describing the types of users and the types of information presented by a specific blog using word processing software (CG3)
• Collect and analyze trends in user browser adoption using spreadsheet software (CG2)
• Plan and execute a usability study of a website that observes the ability of user groups to achieve their goals (CG3)
• Describe the level of success of user groups with navigation and content using word processing software (CG3)
• Describe the types of users, navigation, and terminology presented by a specific website using word processing software (CG3)
• Conduct searches of websites with similar goals and compare and contrast the different content strategies (CG3)

Unit IV Organizing and Diagramming Internet Information Systems

The student will be able to...
• Diagram the organizational structure of a personal blog using presentation software (CG4)
• Analyze and reorganize the structure of a personal blog using presentation software (CG4)
• Diagram the organizational structure of a commercial website using presentation software (CG4)
• Analyze and reorganize the structure of a commercial website using presentation software (CG4)
• Diagram the organizational structure of a rich interactive website using presentation software (CG4)
• Analyze and reorganize the structure of a rich interactive website using presentation software (CG4)
Unit V  Building Internet Information Systems

The student will be able to...

- Construct a personal blog from information that is organized and presented using blogging software and CSS (CG5)
- Construct a commercial website for a business using HTML, CSS and Javascript (CG5)
- Construct an internet application using HTML, CSS, Javascript (CG5)
- Develop rich assets for an interactive educational website using photo and video editing software (CG5)
- Develop a content strategy and write content for a blog, commercial website and an educational website (CG5)

Evaluation of student learning:
Achievement of the course objectives will be evaluated through the use of the following tools:
- Weekly discussion forum including questions about the history and ethics of the Internet (CG6, CG7)
- Three software and hardware technology quizzes (CG1)
- Documents from research projects including spreadsheets, briefs and diagrams (CG2, CG3, CG4)
- Uploaded internet projects created using blogging software, HTML, CSS, Javascript and image and video editing software (CG5)

Project Values/Grade Breakdown

<table>
<thead>
<tr>
<th>The final grade is based on the following values:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Discussion forum</td>
<td>15%</td>
</tr>
<tr>
<td>Technology Quizzes (3)</td>
<td>15%</td>
</tr>
<tr>
<td>Research, Briefs and Diagrams</td>
<td>30%</td>
</tr>
<tr>
<td>Internet Projects (3)</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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</tbody>
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Academic Integrity Statement:

As per the student handbook, “A student will be guilty of violating academic integrity if he/she (a) knowingly represents the work of others as his/her own, (b) uses or obtains unauthorized assistance in the execution of academic work, or (c) gives fraudulent assistance to another student.” Students should read the Academic Integrity policy in the MCCC Rights and Responsibilities Student Handbook. Academic Dishonesty will result in failure of this course.