Instructor:

Wil Gorr <gorr@cmu.edu>, 2109D HBH, office hours Wednesdays, noon to 1:30 p.m. and by appointment

TAs: (Office hours to be posted on Blackboard, 90-732, Staff)

Larissa Chopyk lvc@andrew.cmu.edu
Addam Hall aehall@andrew.cmu.edu
Sanravee (Pow) Kraisithsirin skraisit@andrew.cmu.edu
Chang Liu changli1@andrew.cmu.edu
Rhajiv Ratnatunga rhajiv@cmu.edu
Yuchi Song yuchis@andrew.cmu.edu
Celia Wolfman cwolfman@andrew.cmu.edu

Meeting Times:

<table>
<thead>
<tr>
<th>Section</th>
<th>Class: 1001 Hamburg</th>
<th>Lab: A100 Hamburg</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>T 9:00 – 10:20 a.m.</td>
<td>R 9:00 – 10:20 a.m.</td>
</tr>
<tr>
<td>B1</td>
<td>T 1:30 – 2:50 p.m.</td>
<td>R 1:30 – 2:50 p.m.</td>
</tr>
<tr>
<td>C1</td>
<td>T 3:30 – 4:50 p.m.</td>
<td>R 3:30 – 4:50 p.m.</td>
</tr>
<tr>
<td>D1</td>
<td>T 9:00 – 10:20 a.m.</td>
<td>W 10:30 – 11:50 a.m.</td>
</tr>
<tr>
<td>E1</td>
<td>T 1:30 – 2:50 p.m.</td>
<td>W 10:30 – 11:50 a.m.</td>
</tr>
<tr>
<td>Ft</td>
<td>T 3:30 – 4:50 p.m.</td>
<td>W 10:30 – 11:50 a.m.</td>
</tr>
</tbody>
</table>

Class website: [http://www.cmu.edu/blackboard](http://www.cmu.edu/blackboard)

Textbooks:


Software:

- *Paint Shop Pro X2* — package for processing and refining photos and other images (available in Heinz School computer clusters and download as a 30-day trial from [www.jasc.com/](http://www.jasc.com/), do not install on your computer until needed).
Benefits of ICT:

Information and communications technologies (ICT)—the Internet and related technologies—are having major positive impacts on governments, non-profit organizations, health organizations, businesses, workers, and the public by increasing:

**Information Access** – Often there is no better way to make information available than on the Internet, whether it be to sell, inform, persuade, activate, interact, or provide equal access.

**Efficiency** – Organizations of all kinds are achieving large cost savings by converting manual processes into electronic, web-based transactions, often cutting costs by 75 percent or more. Citizens and businesses now expect the convenience and efficiency of e-government through one-stop websites for services; for example, renewing drivers’ licenses and submitting business permits (“on-line instead of in-line”).

**Governance** – Citizens and interest groups are gaining increased access to political processes and elected officials through digital democracy and government websites. ICT is having major impacts on citizen participation and governance around the world.

Course Objectives:

This course provides an introduction to the design and development of websites for organizations. Most organizational assets are built by teams, and websites are no exception. So, the course includes a team project including differing roles for team members. The course’s objectives include developing:

**Computer proficiency** – Provide knowledge and hands-on skills for building and using professional websites.
- Learn a complex, comprehensive, and leading website authoring package so that you can build or manage building websites for organizations.
- Become exposed to computer programming, including HTML and Javascript, so that you can modify web pages directly using code, build style sheets to centrally control the style of websites, and plug prewritten Javascript modules into web pages.
- Create and modify graphics and images using a software package (Paint Shop Pro).

**Project management skills** – Provide knowledge and skills for working on computer projects in teams:
- Learn fundamentals of project management including systems analysis life cycle, work breakdown structure, and work logs.
- Publish a website using team-oriented tools including local and remote websites with version control.
- Learn easily-maintained designs including web page templates and style sheets for centralized revision and extension of websites.

**Design principles and skills** – Learn approaches and guidelines that support the creative process of system design:
- Learn principles of web page layout for navigation and content
- Study website designs for navigation and access of information
- Learn to structure and compose content for effective use
Grades:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>30%</td>
</tr>
<tr>
<td>Project</td>
<td>40%</td>
</tr>
<tr>
<td>Exam (open-book and notes)</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Course grading will follow Heinz School guidelines as stated in student handbooks, that core courses should have an average grade of B+.

Policy on Collaboration and Cheating:

The instructor will follow Heinz School policies on ethics and discipline as stated in student handbooks. A specific policy for this course is on homework exercises:

Do not copy or modify others’ homework solutions for your homework solutions. Homework must be individual work unless otherwise stated. You may consult each other on clarification, technical, and conceptual issues, but you must do individual problem solving and derive your own solutions, including your own computer work.

Late Homework Policy:

Normally, late homework is not accepted. If you have an extenuating circumstance (illness, need to be out of town, etc.), let me know in advance and I can grant an extension.
Schedule

Week 1 HTML and hand-coding web pages
Assignment #1 (HTML Coding), due 11:59 p.m., 9/3
8/25, Tuesday Lecture in HBH 1001
• Digital data representation and transmission
• Client-server systems and the Internet network
• Internet addresses, domain names, and architecture
• HTML overview
8/26, 27 Lab sessions in HBH A100 (attend your single, assigned lab)
• Instruction: Publishing a web page and creating web folders on a server
• Self-paced tutorial: Coding HTML

Week 2 Web page and site design
Assignment #2 (Simple Dreamweaver website), due 11:59 p.m., 9/10
9/1, Tuesday – Lecture in HBH 1001
[Reading: Chapters 5 and 6 in Lynch and Horton]
• Web page design principles
• Site structure models
• Web page templates
• Content design
9/2,3 Lab sessions in HBH A100
• Instruction: Opening and creating website in Dreamweaver (see Bishop Units A and B for reference)
• Self-paced tutorials: Bishop Units C, D through page 93

Week 3 Overview of web technologies
Assignment #3 (Website with Template, Navigation Bar, and Style Sheet), due 11:59 PM, 9/17
9/8, Tuesday – Lecture in HBH 1001
• Networking: TCP/IP protocol
• Security: cryptography
• Server-side computing
• Website development/maintenance alternatives
9/9,10 Lab sessions in A100
• Instruction: Building style sheets in Dreamweaver for HTML tags
• Self-paced tutorials: Bishop Units E, F, and G through page 165, ICT Tutorial: Cascading Style Sheets
Week 4 Project management
9/15 Tuesday – Lecture in HBH 1001
Assignment #4 (website with processed images), due 11:59 p.m., 9/24
- Project life cycle
- Storyboard, work breakdown structure
- Introduction to class project
9/16, 17 Lab sections in HBH A100
- Instruction: Check in/Check Out version control in Dreamweaver
- Self-paced tutorial: Paint Shop Pro (processing photographs, layering images, creating a banner)

Week 5 JavaScript programming
9/22, Tuesday – Lecture in HBH 1001
Assignment #5 (JavaScript), due 11:59 p.m., 10/1
9/23, 24 Lab Sections in HBH A100
- Self-paced tutorial: JavaScript Programming

Week 6 Project
Project, due 11:59 p.m., 10/8
9/29, Tuesday – Q&A on project requirements
9/30, 10/1 Work on project in HBH A100

Week 7 Project
10/6, Tuesday – Work on Project in HBH A100
10/7, 8 Work on Project in HBH A100

Final Exam
10/13, Tuesday, normal class time