Taming the Wild World of Web Resources:
How to Manage Online Activities for a Large Number of Multi-section Chemistry Courses

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Web Management at UIUC in General Chemistry

- ~25 multi-section courses / year
- ~4500 students/semester
- ~10 course directors/semester
- 4 servers (Solaris / NT)
- ~2.6 million files
- Average number of hits per day: 75,000
- Peak number of hits per day: 200,000
Developing a Plan

• Before purchasing software, hiring personnel, buying servers; you must first evaluate what you plan to do and how you are going to do it.

• Periodically reevaluate your plan.
Questions to Ask When Developing a Plan

- What are your educational goals?
- What courses need online activities?
- What types of activities are desired?
- How can those activities be implemented?
- Do you have computer support? (Hardware, software, system administration)
- Can a team be formed to develop and use the materials?
- What is your weakest area?
Web Administrative Team

• One person as project manager
  – Needs degree in chemistry first
  – Needs well-rounded knowledge of the web and computers

• Other team members
  – Chemistry Instructors who plan develop and use the materials
  – Hardware and software specialists
Impact on Users

• Students
  – How will it help them learn chemistry?

• Teaching Assistants
  – Will the online materials give them more time for student contact?

• Course Instructors
  – Will it help them manage the course more effectively?

• Web Administrative Team
  – Will they have time to do a good job?
Types of Activities

• e-Learning Activities:
  – Homework, Quizzes, Pre-Labs, Post-Labs
• Grade Management:
  – Student, TA, and Instructor Gradebooks
• Assessment:
  – Surveys
• Distribution of Static Information:
  – Course syllabus, Calendar, Announcements
• Communication Tools:
  – E-mail, ListSers, Message Boards, Chat, Whiteboards
Site Design

• Draw a flow chart of how users get to all materials on your web site.
  - If it looks complex, simplify it.
Flow Chart of an Organized Site
Flow Chart of a Poorly Organized Site
Site Design

• Draw a flow chart of how users get to all materials on your web site.
  – If it looks complex, simplify it.

• Courses should look personalized, but function according to a set structure.
Lecture Course for Non-Majors
Lab Course for Chemistry Majors
Site Design

• Draw a flow chart of how users get to all materials on your web site.
  – If it looks complex, simplify it.
• Courses should look personalized, but function according to a set structure.
• **Naming of files and directories should be consistent.**
Naming of Files and Folders
Training

- Train everyone to train others.
- Have one-on-one training.
- Have periodic group training.
- Some TAs can perform web tasks for instructors.
Security and Disaster Recovery

- Update your operating system with the latest patches.
- No e-mail on the web server.
- Set web data up on a separate partition than the OS.
- Use reasonable passwords for instructors, like 37acs4b, not chem101.
- Restrict access to files when possible.
- Back-up your Files!
Helpful Hints

• Utilize all contacts
• Continue to read up on latest technology
• Test in small courses first
• Avoid internal politics, get consensus
• Informally, talk to students
• Plan ahead for software and hardware purchases
• Think BIG, but act PRACTICAL!
Recommendations

• Develop a Plan
• Hire an instructor with Ph.D in Chemistry and extensive background in Information Technology / Computer Science.
• Purchase adequate hardware and software
• Build a team of instructors to develop and teach a related set of materials (Gen.Chem., Organic, etc.) for a 2 year period with periodic meetings of the team.
• Assess, Revise and Assess!
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