

# 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

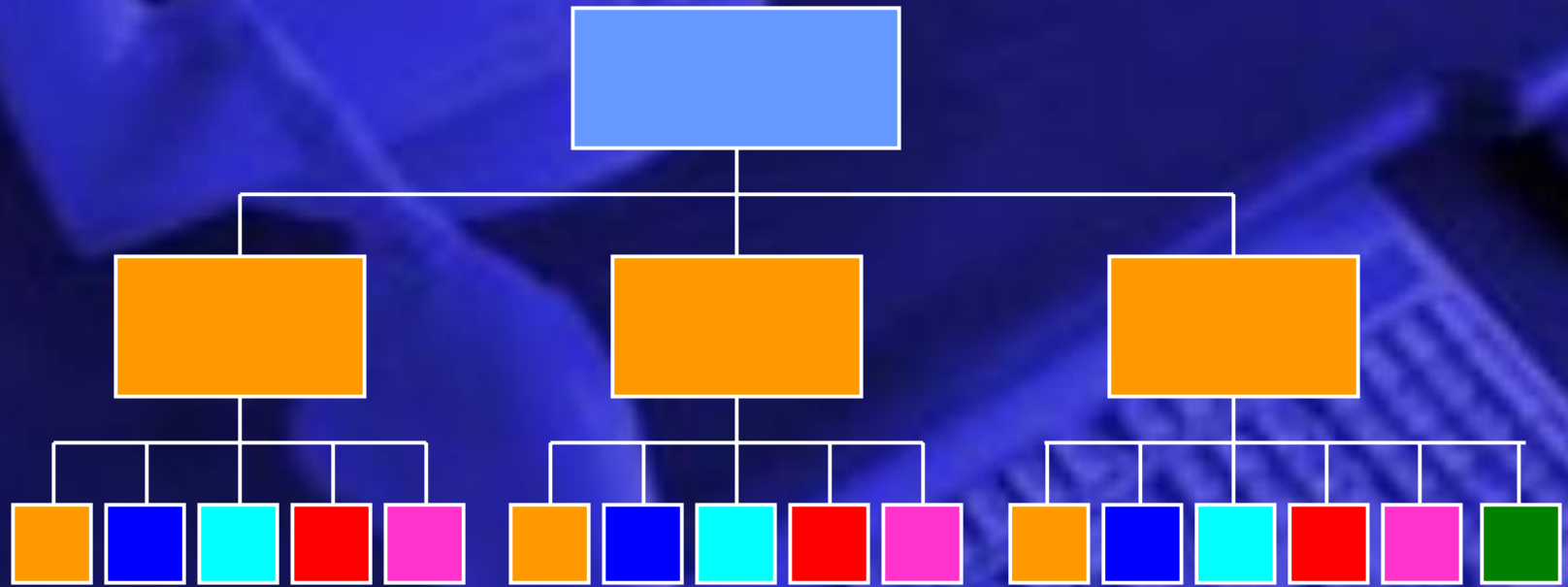
- e-Learning Activities:
  - Homework, Quizzes, Pre-Labs, Post-Labs
- Grade Management:
  - Student, TA, and Instructor Gradebooks
- Assessment:
  - Surveys
- Distribution of Static Information:
  - Course syllabus, Calendar, Announcements
- Communication Tools:
  - E-mail, ListServes, Message Boards,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

# Site Design

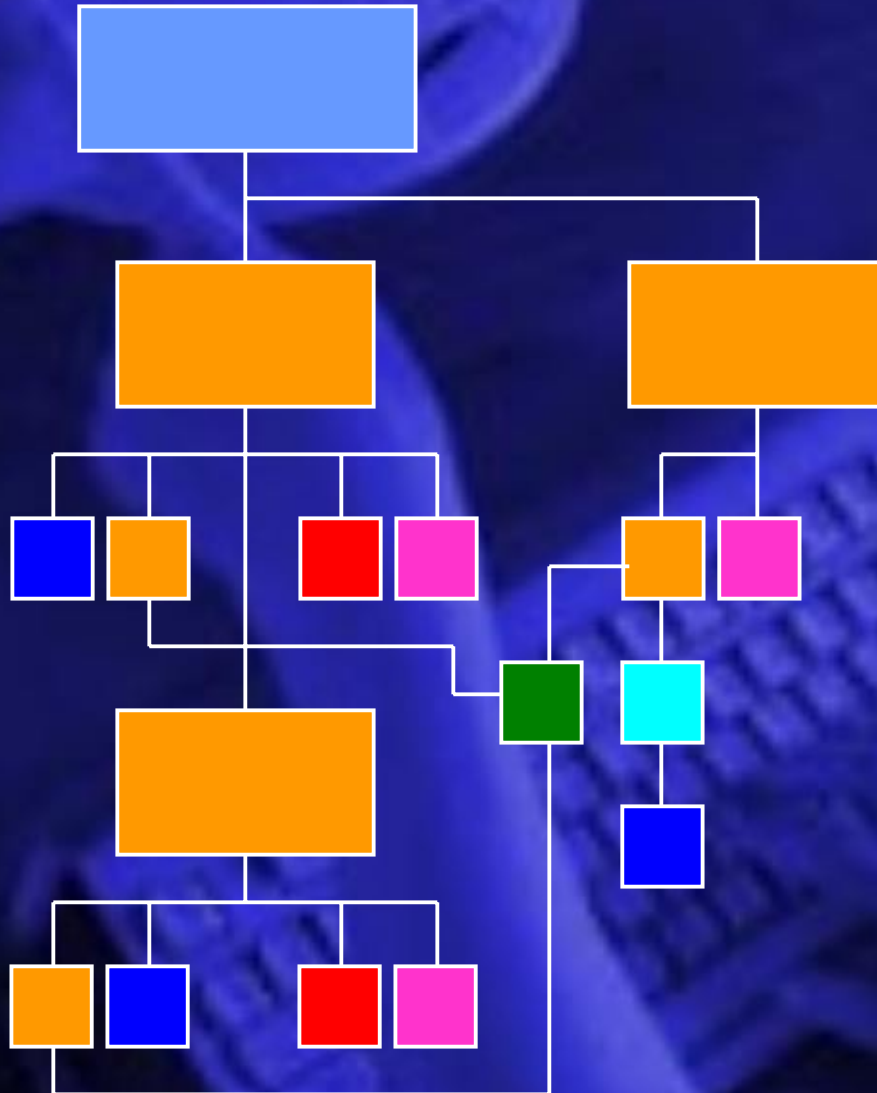
- **Draw a flow chart of how users get to all materials on your web site.**
  - **If it looks complex, simplify it.**



# 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 Chemistry Majors

CHEMISTRY 108

ANNOUNCEMENTS

COURSE INFO

CALENDAR

GRADEBOOK

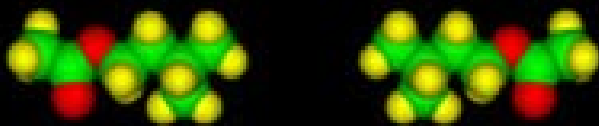
HOMEWORK

REFERENCES

CONTACT INFO

The University of Illinois  
at Urbana-Champaign

# Lecture Course for Non-Majors



## Chemistry 101D

ANNOUNCEMENTS

COURSE INFORMATION

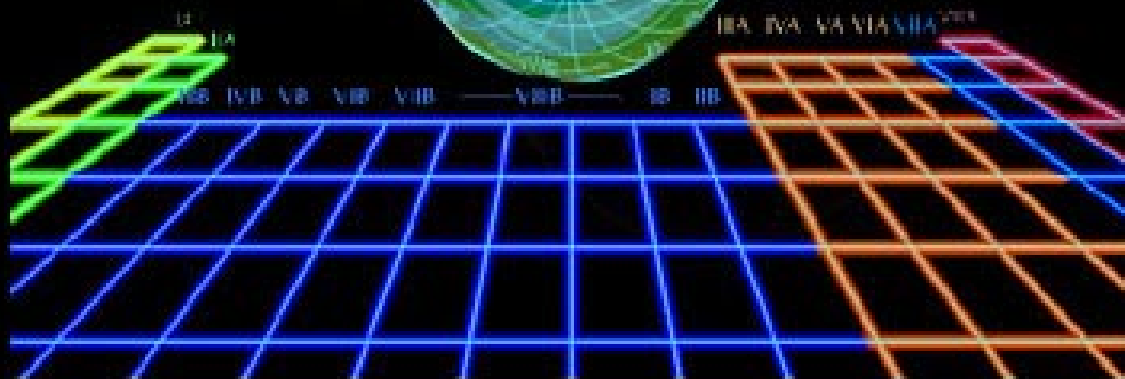
CALENDAR

GRADEBOOK

HOMEWORK

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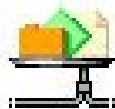
# Lab Course for Chemistry Majors

*chemist109*

[log-in](#) | [log-out](#) | [log-help](#)



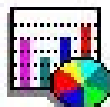
Announcements



Course Information



Calendar



Gradebook



Lecture Notes



Laboratory

University of Illinois at Urbana-Champaign

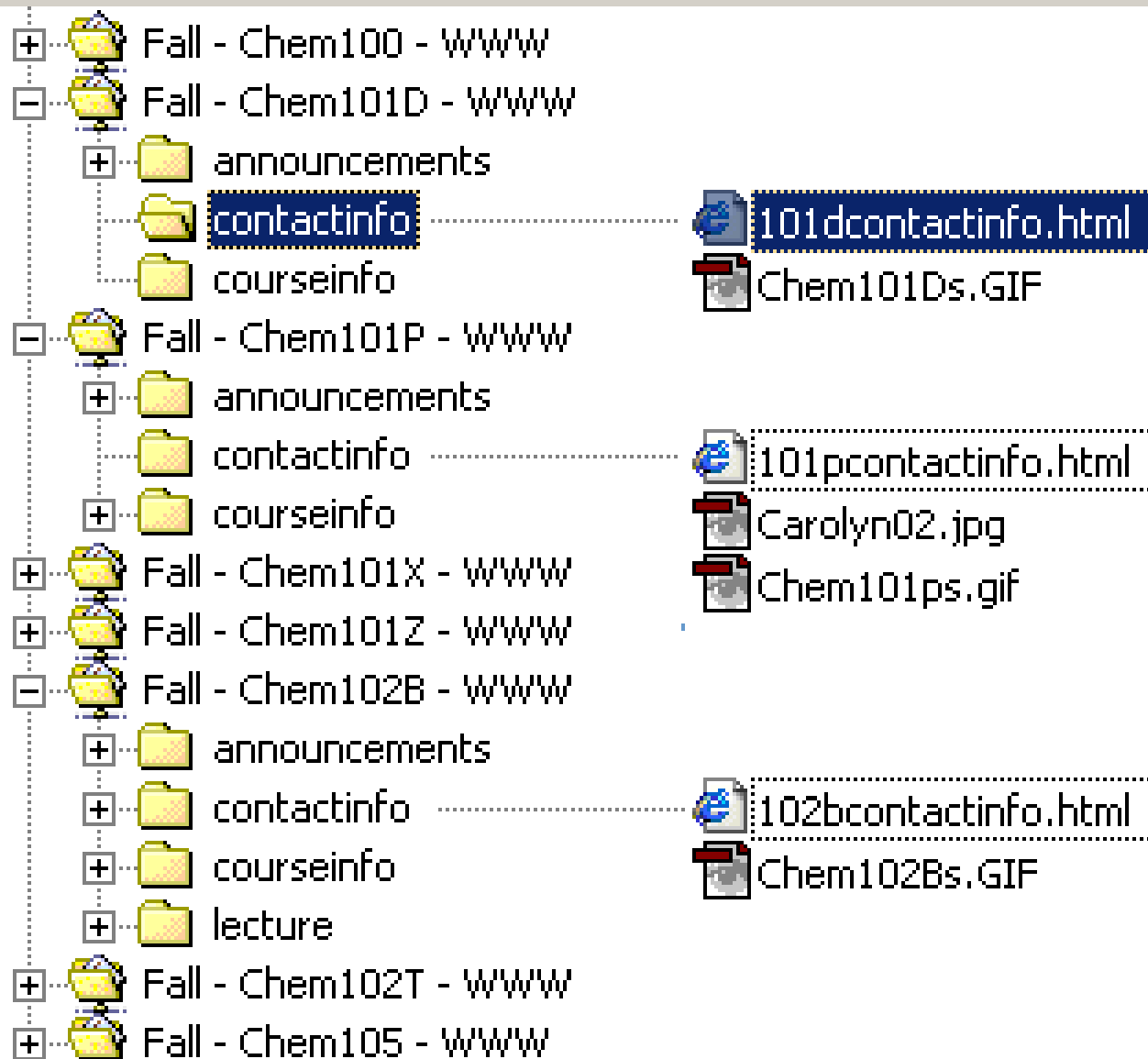


# Site Design

- 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.**

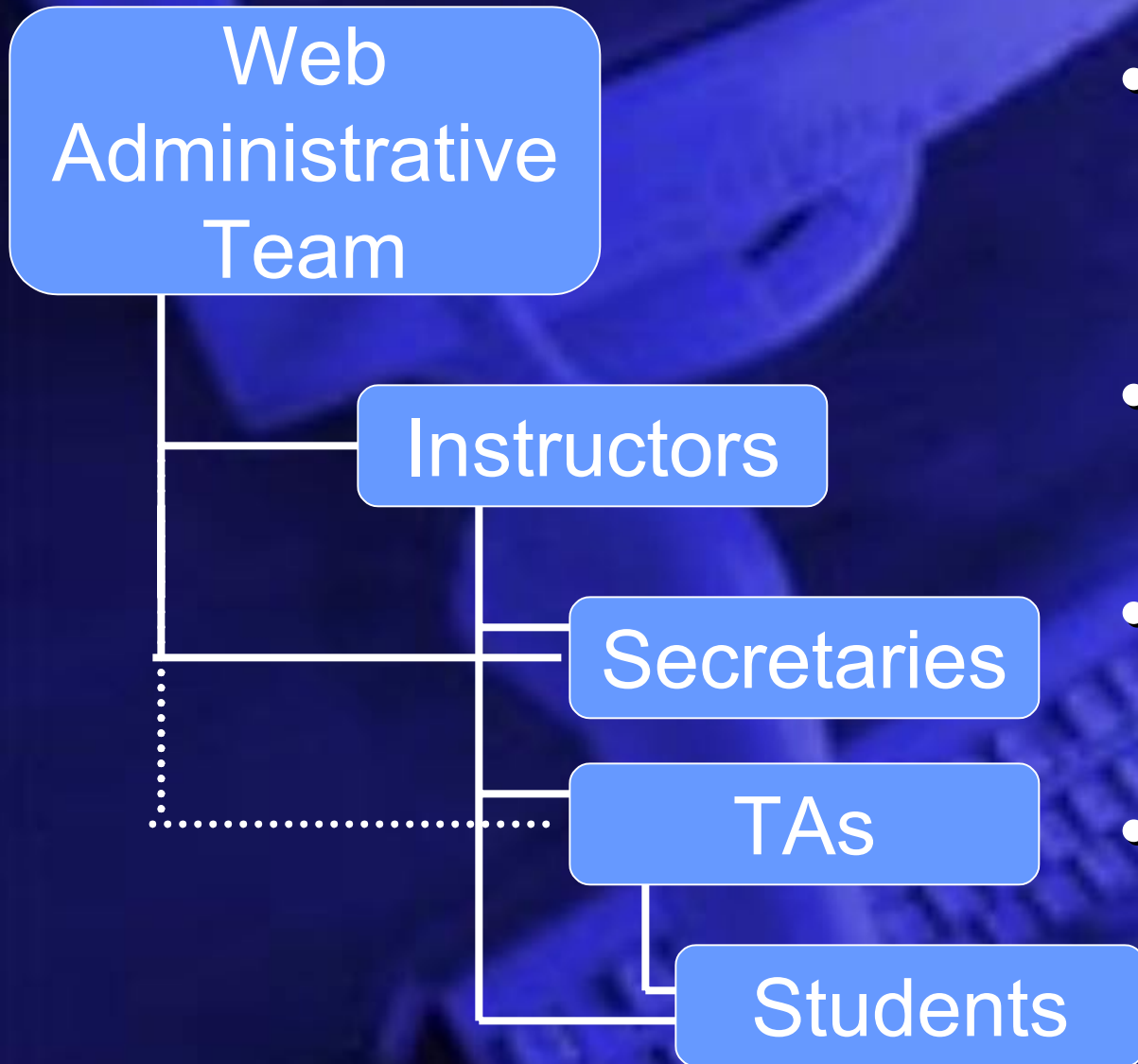
# Naming of Files and Folders

## Folders



# Training

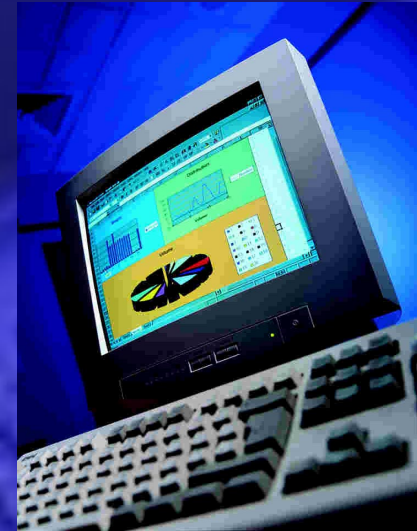
- Train everyone to train others.
- Have one-on-one training.
- Have periodic group training.
- Some TAs can perform web tasks for instructors.





# 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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