



## Interdisciplinary Modeling: Water-Related Issues NRES 701D (Summer 2008)

### Summary Report of Use of Wiki

This brief report summarizes our experience with using the wiki hosted by the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) for a course on interdisciplinary water-related modeling that was offered in Summer 2008 jointly by the University of Nevada Reno (UNR) and the University of California at Davis (UCD). See <https://cuahsi.centraldesktop.com/intmod/> for the wiki being summarized here.

#### Background

The overall goals of this course were to introduce students to models used in many different disciplines to address water-related issues, talk about issues related to using models from different disciplines to address water-related issues, and give students experience in working with other disciplines to address such issues. The course involved 17 faculty and 1 post doc from UNR, UCD, and the Desert Research Institute (DRI) who taught the course, and 8 graduate students from UNR. No students participated from UCD this year, although it is intended that the course will continue to be offered jointly by UNR and UCD so that students from the two institutions can interact. Enrollment was also open to graduate students from other institutions through UNR Extended Studies.

The course was modeled after a workshop funded by the National Science Foundation in 2005 that involved developing the curriculum for a course on interdisciplinary modeling for aquatic ecosystems (Saito et al. 2007). For that course, we used a wiki hosted by the Digital Learning in Environmental Science Education (DLESE). We were asked to remove our materials from the DLESE wiki within a year, and we moved the materials to [www.cabnr.unr.edu/saito/intmod](http://www.cabnr.unr.edu/saito/intmod), which is not an interactive website.

#### Use of wiki

For the 2008 course, we used the CUAHSI-hosted wiki before and during the course. Items posted to the site included logistical information for participants, materials for lectures and exercises, required and recommended readings for topics, and materials for the class projects. The wiki was used extensively during class to share lecture, exercise, and project materials. This was possible because the classroom in which the course was held had wireless internet access, and we had borrowed or rented laptops for the students to use during the course. The wiki was also used by some faculty to develop collaborative exercises.

Postings to the wiki were predominantly done by the lead instructors (Dr. Laurel Saito at UNR and Dr. William Fleenor at UCD) and the course assistant, Amaya Smith. Many of the instructors and collaborators gave their files to one of these people who then uploaded the documents to the wiki. Several faculty did also get logins and passwords and uploaded their own material to the site.

#### Feedback regarding wiki

The use of a wiki for a course like this with multiple instructors facilitates simpler interaction and independence in providing materials. The interdisciplinary nature of this course requires that individual faculty select their own materials to use in the course and design their own lectures. However, it is also helpful to see what others in the course will be covering, and the wiki enables all to have access to this information even as the lectures and exercises are being developed.

Numeric course evaluation ratings of the wiki indicated students found it to be somewhere between "moderate help" and "much help." Comments from students regarding the wiki included:

- Really enjoyed the online wiki and reducing paper through the use of online tools
- Always appreciated getting presentations in hard copy/online availability
- The class wiki was great. The entire class was really impressively organized and it was great to know that the notes and readings were all right there.

Faculty did not fill out formal evaluations of the wiki, but overall verbal feedback during the course was positive. For those that posted materials extensively to the website, there were some limitations of the site in terms of how it automatically set up the navigation bars at the top (this was a problem if a page was moved to a different location from where it was originally created), and options for layout of materials on the page. However, we were able to work around these limitations to accommodate our needs.

#### Future plans for wiki

It is our intention to continue to offer this course and to continue to develop the wiki as a virtual textbook for the course. Furthermore, we'd like the resources to be available to others who may be interested in teaching a course like this. Developing effective exercises for an interdisciplinary modeling course involves some trial and error – we learn a lot as we attempt to do things in class. As we develop exercises that work well, we can post the exercises and materials to save others course development time. The virtual textbook could then be in an ongoing state of development as instructors from different institutions added their expertise to the site.

Hosting the wiki through CUAHSI would hopefully also provide good publicity about the availability of the site, resource, and course to a broader audience that would have interest in the content (and possibly contributing to the content). We had hoped that the current wiki would have been accessible to people browsing the CUAHSI website so that we could attract students from other institutions to the summer 2008 course. In the future, it could hopefully be used in that capacity. If the CUAHSI governing board feels that this type of use of the wiki is appropriate, we would be very interested in permanently housing the wiki through CUAHSI with a link to the main CUAHSI website.

Dr. Laurel Saito is committed to continuing to coordinate this and offer this course, which will be offered every two years. She is also committed to continuing to maintain and develop the wiki. Please contact Dr. Saito at [lsaito@cabnr.unr.edu](mailto:lsaito@cabnr.unr.edu) or 775.784.1921 with any questions about the wiki or regarding further development of the wiki.

#### Reference

Saito L, Segale HM, DeAngelis DL, Jenkins S. 2007. Developing an interdisciplinary curriculum framework for aquatic ecosystem modeling. *Journal of College Science Teaching* 37(2):46-52.