

Topical Seminar: Flash Media Server**Dates:** 3.30.06 & 3.31.06 9:30 - 4:45**Credits:** 1**Instructor:** Charlie Roberts - charlie@charlie-roberts.com

Course Objective: Students will leave the workshop with a background in streaming media, the ability to create basic applications for synchronous communication in Flash, and ideas on exploring the role of these technologies in education.

Description: This course looks at the implications of streaming media for education with an emphasis on exploring the Flash Media Server. The FMS enables the easy deployment of streaming video and video conferencing solutions via a set of "drag and drop" components inside of Flash. These components include collaborative whiteboards, text chats, video transmission / reception, slideshow presentations and other synchronous communication tools.

Students will learn to use these components and gain an introduction on creating their own. They will examine existing products that utilize streaming media, discuss the design issues surrounding them, consider the implications such products have for education and finally build their own educational project using the FMS.

Why this course? This is the time to get in on the ground floor creating realtime communication technologies for the web. The recent advent of the Flash Media Server means that 97% of the web population has the ability to participate in video broadcasts, interactive seminars and video / audio blogging without having to install any extra software on their computer. Broadband internet access is available to an ever growing segment of the population and computers are now being shipped with microphones and webcams built in to them. We are rapidly moving towards a new cyberspace where video / audio and realtime communication will be as important as images and email are now.

Finally, the fact that the Flash Media Server is relatively new technology means that not many educators are familiar with its usage. There are great opportunities for innovative research using this tool.

Topics Discussed:

- Benefits of synchronous communication for education
- Fundamentals of streaming media architectures and deployments
- Comparison of available streaming media technologies (Quicktime, Real, Flash, Windows Media)
- Video compression for Flash
- Bandwidth concerns for online media
- Administering the Flash Media Server
- Using the Flash Media Server components
- Creating custom communication applications using Flash
- Existing educational software using synchronous communication

Recommended Readings:

Adobe Streaming Media Primer: Free .pdf available at <http://www.adobe.com/motion/primers.html>. This provides a good introduction into important topics in streaming media.

Programming the Flash Communication Server: <http://www.oreilly.com/catalog/progflashcs/index.html>. This seems to be the current best reference for the Flash Communication Server, but it expects that you have at least intermediate ActionScript skills (if you know any other object oriented programming language you'll probably be fine)

ActionScript for Flash MX: The Definitive Guide: <http://www.oreilly.com/catalog/actscrip2/index.html>. An excellent reference for ActionScript in general.

Both of the above O'Reilly books should be available to view online for free through the Columbia E-books library.

Services for Students with Disabilities. The College will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Office of Access and Services for Individuals with Disabilities for information about registration (166 Thorndike Hall). Services are available only to students who are registered and submit appropriate documentation." As your instructor, I am happy to discuss specific needs with you as well.

IN Incomplete. The grade of Incomplete is to be assigned only when the course attendance requirement has been met but, for reasons satisfactory to the instructor, the granting of a final grade has been postponed because certain course assignments are outstanding. If the outstanding assignments are completed within one calendar year from the date of the close of term in which the grade of Incomplete was received and a final grade submitted, the final grade will be recorded on the permanent transcript, replacing the grade of Incomplete, with a transcript notation indicating the date that the grade of Incomplete was replaced by a final grade.

If the outstanding work is not completed within one calendar year from the date of the close of term in which the grade of Incomplete was received, the grade will remain as a permanent Incomplete on the transcript. In such instances, if the course is a required course or part of an approved program of study, students will be required to re-enroll in the course including repayment of all tuition and fee charges for the new registration and satisfactorily complete all course requirements. If the required course is not offered in subsequent terms, the student should speak with the faculty advisor or Program Coordinator about their options for fulfilling the degree requirement. Doctoral students with six or more credits with grades of Incomplete included on their program of study will not be allowed to sit for the certification exam.