EDPS 5151/6151
Educational Applications of Technology in Grades 6-12

College of Education
University of Utah

Semester: Spring 2015
Instructor: Dr. Robert Zheng
Office hours: T   1:00-2:00 PM, others by appts.
                    R   1:00-2:00 PM, others by appts.
Class meets: T.,   2:00 – 4:30 PM (MBH 106)

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COURSE DESCRIPTION
The purpose of this course is to provide an introduction to the use of technology in educational settings. Instructional uses of technology will be explored and tied to current theories of learning to help educators make decisions about how to effectively integrate the use of technology across content areas. Students will learn to use a variety of technological applications to support teaching and learning.

OBJECTIVES
At the completion of this course, the student will be able to:
1. Develop and articulate a personal understanding and philosophy of the advantages and disadvantages of technology used in specific educational situations
2. Use ASSURE model to plan, design, and develop technology integrated lessons
3. Understand, be able to explain, and take reasoned positions on important issues and problems facing educators as they apply educational technology to support teaching and learning
4. Demonstrate competency in the use of productivity tools to teach subject content
5. Demonstrate competency in the use of cognitive tools to teach subject content
6. Demonstrate competency in the use of technology to actively engage students in the classroom through development of technology lesson plans
7. Demonstrate competency in the use of technology for community building including online social communication, bridging with parents and community, etc.
8. Evaluate the effectiveness of educational technology in teaching and learning

REQUIRED READINGS

Readings	5151	6151
WebQuests		
Vidoni et al. (2002): WebQuests: Can they be used to improve critical thinking skills.		x
Zheng et al. (2008). WebQuests as perceived by teachers		x
Zheng et al. (2005). WebQuests as perceived by high education students	x	x
Wang et al. (2008). WebQuests in preservice teacher education	x	x
Visual learning		
Kollofel (2012). Exploring the relation between visualizer-verbalizer cognitive styles and performance with visual or verbal learning material.	x	x
Jin (2013). Visual design guidelines for improving learning from dynamic and interactive digital text.	x	x
iPad Application		
Murray et al. (2011). Teaching and learning with iPad, ready or not?	x	x
Hutchison et al. (2012). Exploring the use of the iPad for literacy learning.	x	x
Wiki Application		
Hadjerrouit (2012). Wiki for collaborative writing.	x	x
Allsop (2011). Wiki for collaborative learning	x	x
Matthew et al. (2009). Wiki for learning in language arts		x
Technology Integration		
Heinick et al. (1993). ASSURE Model	x	x
Vermunt (2004). Patterns in student learning.	x	x
Pashler et al. (2008). Learning style debate		x

COURSE POLICIES AND PROCEDURES

<u>Attendance, punctuality, and promptness</u>

Courses in the teacher certification program are intended to develop professional understandings, habits, and attitudes. Since attendance, punctuality, and promptness are of critical importance in a professional person, a no-cut policy will be observed in this course. If you are going to be absent from class, you must contact the instructor by phone or e-mail **before** the scheduled class meeting. ***More than two absences and/or excessive lateness may result in a lowered final grade.***

EVALUATION METHODS/GRADES

Students will earn points for each of the projects, activities, research participation. Final grades are cumulative points from the above course activities.

Research participation		**8%**
Class attendance	5%	
Learning activities		25%
Class discussions/presentations		12%
Paper		10%
Projects		40%
_____		
Total		100%

Grade	Points	Grade	Points
A	95-100	C+	77-79
A- B+	90-94	C	74-76
B	87-89	C-	70-73
B-	84-86	D+	67-69
	80-83	D	64-66
		D-	60-63

<u>Research Participation (8%):</u>

Students are required to participate in research projects for this class (**See details on page 6**).

<u>Class Attendance (5%):</u>

Students in EDPS 5151/6151 are expected to attend class on time. An absence that exceeds three class attendances will automatically drop your grade to B (=80) in this class. A failure to attend ½ of the classes will result in a failure of the class.

<u>Learning Activities (25%):</u>

     <u>Learning activities</u> involve applying various technologies, techniques, and methods covered in the class to develop learning/instructional activities for teaching and learning. The activities include:

    Activity 1: WebQuests
    Activity 2: Content presentation with cloud-based presentation Prezi
    Activity 3: Online video with PhotoStory
    Activity 4: Visuals for learning
    Activity 5: Animation for learning
    Activity 6: Social learning with Wiki
    Activity 7: iPad for learning

<u>Class Discussions and Presentations (12%):</u>

     <u>Class discussions and presentations</u> include in-class discussions and group presentations based on the assigned readings.

<u>Projects (40%)</u>

1. ***Instructional Website (20%).*** Students will build an instructional website that includes the domain content and activities. The content will take about 10% with activities for another 10%.

   Content
   The website will include related domain content for learning. Labs will be assigned in the development of the content
         Lab1. Define content and develop a flowchart for the website
         Lab2. Design and Develop the instructional website
         Lab3. Evaluate the instructional website

   Activities
   The activities part will include the incorporation of learning activities into the website. Students will select part of the content from the website and use/apply technologies to deliver the specific content.
   Activities include:
         Activity 1: WebQuests
         Activity 2: Content presentation with cloud-based presentation Prezi
         Activity 3: Online video with PhotoStory
         Activity 4: Visuals for learning
         Activity 5: Animation for learning
         Activity 6: Social learning with Wiki

2. ***Final Project - Technology integrated lesson plan and development (20%).***
   The final project is a group project (max. 3-4 students).
   <u>Technology integrated lesson plan (10%)</u>
   Students will
   - Select a learning unit and develop a lesson plan based on the requirements.
   - Show how technologies will be used effectively in assisting students' learning.
   - Show *how* technologies will promote cooperative learning, facilitate class interaction, and enhance basic content retention and critical/creative thinking.
   - Develop technologies to support the activities in lesson plan

   <u>Lesson plan final presentation (10%)</u>
   Students will
   - Prepare a presentation PowerPoint
   - Demonstrate how technologies are used to support learning

   Submit the lesson plan and technologies that are used in the technologies. Note: the technologies refer to actual technologies developed by the students for the final project which may include videos, animation, instructional web pages, etc.

DIVERSITY STATEMENT
The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Students in this course are expected to meet the Fitness to Teach criteria located at:
http://uite.utah.edu/_documents/www-ed-utah-edu/programs/Fitness%20to%20Teach%20Final.pdf

Tentative Schedule
6/19-7/30

Lessons	Topics and Activities	Reading Assignments (completed before class)	Deliverables
1/13	o Introduction o Subject pool sign-up	Weebly tutorials 1-3	Teams, article presentations organized, orientations to Canvas and subject pool
1/20	o Weebly in-class practice -title page -add new pages -navigation: page indentation • Designing effective webpage: content and flowchart	**Readings: WebQuests** Vidoni et al. (2002) Wang et al. (2008) Zheng et al. (2005, 2008) Weebly tutorials 4-5	Lab1. Define content and develop a flowchart for the website Due: 1/27
1/27	o Weebly in-class practice -survey and contact form -slide show. • In-class review content and flowchart		Lab2. Design and Develop the instructional website Due: 2/3
2/3	• Integrating the Internet in classrooms: WebQuests • **Group Article Discussion:** Group (1): WebQuest learning	**Readings: Visual Learning** Kollofel (2012) Jin (2013) Prezi presentation tutorial	Lab3. Evaluate the instructional website Due: 2/10
2/10	• In-class web evaluation: peer review of evaluation scenario • WebQuests development		Activity 1: WebQuests Due: 2/24
2/17	• Cloud based presentation with Prezi • WebQuests development • **Group Article Discussion:** Group (2): Visual learning	**Readings: Wiki Application** Allsop (2011) Hadjerrouit (2012) Matthew et al. (2009) • Photo Story tutorial	Activity 2: Content presentation with cloud-based presentation Prezi Due: 2/24
2/24	• Webquest presentation • Video production with Photo Story	• Multimedia Tutorial 1	Activity 3: Online video with PhotoStory Due: 3/3
3/3	• Multimedia 1 • **Group Article Discussion:** Group (3): Wiki application • In-class demonstration of Photo Story activity project.	**Readings: iPad Application** Hutchison et al. (2012). Murray et al. (2011).	Activity 4: Visuals for learning Due: 3/24
3/10	• Multimedia 1	• Multimedia Tutorial 2	
3/15-22	Spring Break		
3/24	• Multimedia 2 • **Group Article Discussion:** Group (4): iPad application	**Readings: Technology Integration** Heinick et al. (1993). Pashler et al. (2008). Vermunt (2004).	Activity 5: Animation for learning Due: 4/7
3/31	• Multimedia 2	• Wiki application	***Project 1. Instructional Website Due: 4/28***

4/7	• In-class demo: animation • Wiki development **Group Article Discussion:** <u>Group (5):</u> Technology integration.	• iPad apps tutorial	Activity 6: Social learning with Wiki Due: 4/14 ***Term Paper*** ***Due 4/28***
4/14	• iPad integration • Technology integrated lesson plan		***Project 2: Technology integrated lesson plan*** ***Due: 4/28***
4/21	• iPad integration • Lesson plan development		Activity 7: iPad for learning Due: 4/21
4/28	Technology integrated lesson plan development and critique		
5/5	Final Week		

<u>Instructions for the Research Requirement</u>

<u>Introduction</u>
Participating in research is an important component for students enrolled in an educational psychology course. To effectively use research in your profession, it is helpful to know how research is generated. The Education Psychology Subject Pool allows students to participate in research that has been approved by the University of Utah's Institutional Review Board (IRB). For your participation in research (Option 1), you will earn course credit. Alternatively, you can satisfy this research requirement and earn credit by completing Option 2, which requires students to read a selection of chapters and pass a set of multiple-choice tests on the readings. How you wish to satisfy this requirement is your choice.

Option 1: Option 1 entails participating in research studies conducted by students and faculty in the Educational Psychology Department. The total amount of time you are required to participate is listed on your course syllabus. **All sessions must be completed by April 28.** *It is safest to sign up and complete the requirement early in the term, because sessions later in the term can become full if too many students delay*.

<u>Guidelines for Earning Credits</u>:
  a. For each one-hour session successfully completed, you will earn one credit toward your research participation requirement.
  b. Failing to cancel an appointment and not showing up will result in a loss of credits equivalent to the duration of the missed appointment (e.g., one credit would be lost for a missed one-hour appointment). Any credit loss due to a missed appointment can be made up by successfully completing another research appointment via the same subject pool at a later point in the same semester.

c. In the event that you show up for a scheduled appointment, but the research assistant or principal investigator responsible for the scheduled study does not show up, you will still receive credit for the scheduled session. To ensure that you receive credit in this situation, you should contact the subject pool administrator via the following email address:edps-research@utah.edu.

d. Full completion of, or failure to complete, the research component of the course can only augment or reduce a student's course grade by a maximum of one grade level (e.g., B to B+, or reverse).

Laboratory Hours

Your participation is greatly appreciated, and of great importance to the research. As we know that each of you has very busy schedules we will do our best to accommodate you.

Arriving for your appointments at the times you have scheduled is **VERY IMPORTANT**. Rescheduling for missed appointments may be difficult. If you need to change an appointment please be sure to contact the laboratory at least 24 hours before your scheduled time. It is also important to be **ON TIME**. Typically there will be several participants during each session. It is very disruptive when someone arrives late. If you arrive several minutes late you may be informed that you will need to reschedule your appointment.

Appointment Locations

The *Laboratory for Cognition and Development* is located on the third floor of MBH, in Room 308B.

The *Reading Lab* is located on the third floor of MBH, in Room 308S.

The *Psychophysiology Lab* is located on the second floor of MBH, in Room 206.

The *Multimedia and Instructional Design Lab* is located is located on the third floor of MBH, in Room 308J-K.

The *Instructional Design and Educational Technology Lab* is located on the first floor of MBH, in Room 106.

Most of the appointments will be scheduled for one of these three locations, but there may be some studies that are conducted elsewhere. When your appointment is confirmed, please make note of where you should go.

Option 2: If you do not wish to participate as a research subject, you may complete the research requirement by reading sections of book chapters on educational research methodology and taking a multiple-choice test on each selection. For each selection, the reading and accompanying 25-question quiz are presented on a computer in the Laboratory for Cognition and Development in MBH 308B. Our goal is that Option 2 consumes as much time as Option 1. If you have participated in a portion of Option 1 but decide to withdraw as a research participant for any reason, you may complete the requirement by performing a pro-rated portion of Option 2. You will sign up for Option 2 appointments in the same manner as Option 1, and the details are described below.

Getting Started

The Experiment Management System provides an easy method for you to sign up for studies and alternative activities to fulfill your Research Requirement. It also allows you to track your progress toward fulfilling the requirement throughout the term. Everything is done through the software's web-based interface, so you can access the system at any time, from any computer, with a standard web browser.

After you log in to the system, you can view a list of available studies and any restrictions, sign up for studies that interest you, and track your progress throughout the semester. The system will track when you receive credits for a study, so you can view this online as well.

Requesting an Account

Using your web browser, go to https://utahedps.sona-systems.com/ . If you participated in the Educational Psychology Research Participation Pool in a previous semester, you may be in the system already and you can proceed as before. Otherwise, use the link on lower left corner that says *New Participant* for requesting an account. Click the link, and you will see the screen shown below that asks for some basic information. **IMPORTANT**: Type your full **UNID** for both the UserID and the Student ID number (e.g., u0009999). Also, it is very important to enter your correct EDPS course and section number.

After you complete the request for an account, you will receive an email notification to your university email account with your login information. You will be assigned a default password, which you are allowed to change during your first login. You may also provide an alternate email address (after your first login) if you prefer to receive future notifications at another email address. The email will come from edps-research@utah.edu, so be sure to configure your junk mail filters to allow email from this address.
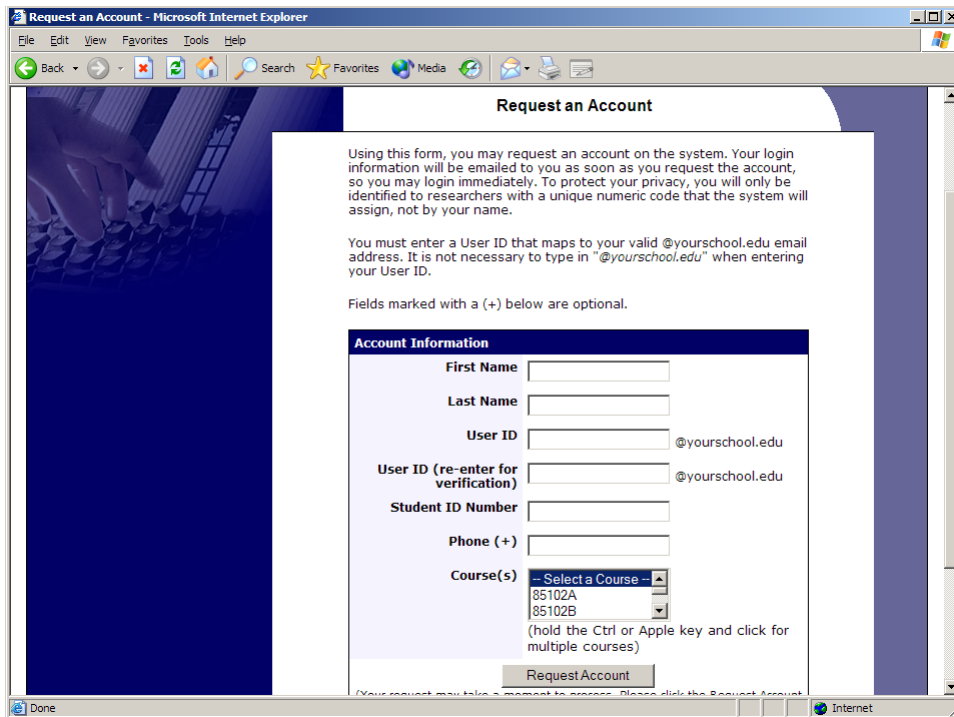
Logging In

Once you have your login information, go to the front page of the site and enter your user ID and password to log in.
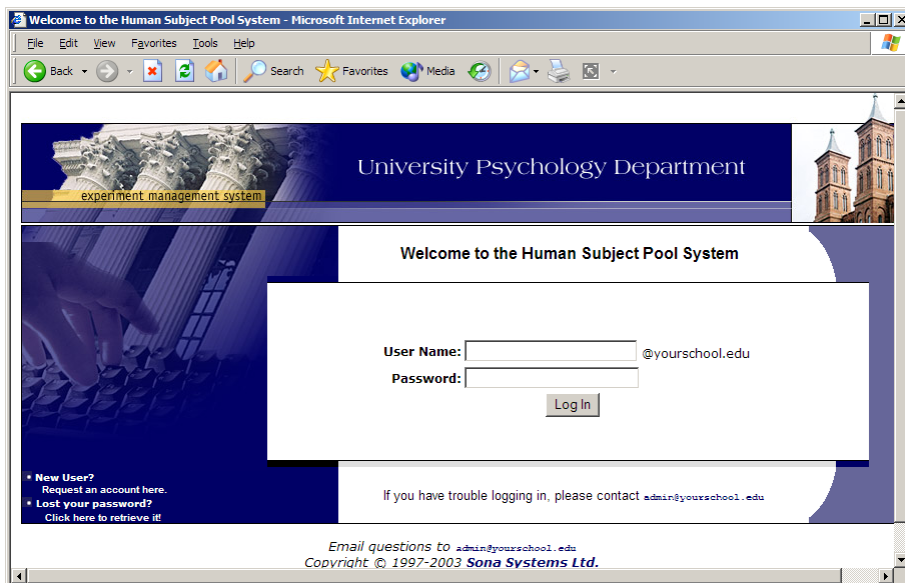

Figure 1 - Login Page

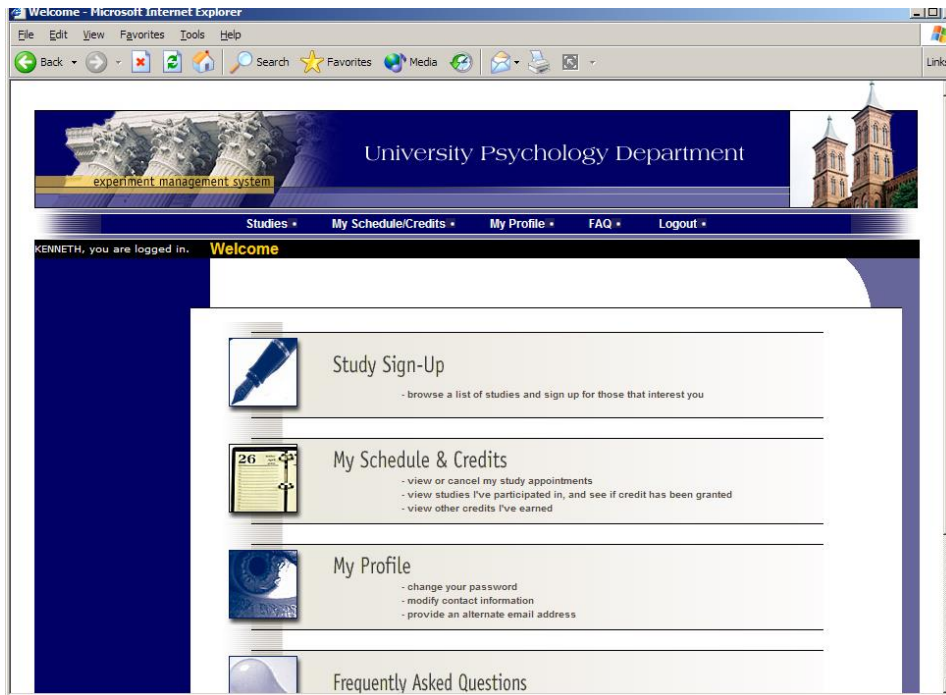After logging in, you will see the Main Menu.

Figure 2 - Main Menu

<u>Signing up for Studies (Option 1) or the Alternative (Option 2)</u>
<u>Viewing Studies</u>
To view a list of studies and alternatives, click on Studies from top toolbar. You will see a list of studies and the alternative to participating in research studies. A brief description of each study will be listed, as well as any special requirements that may restrict your eligibility to participate in the study.
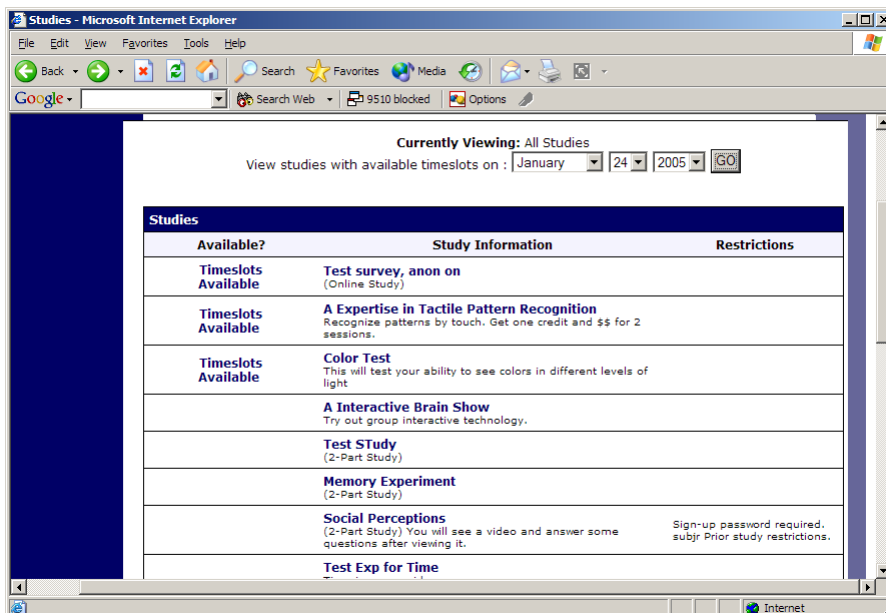

Figure 3 - Viewing Studies

Studies that have available participation times (timeslots) will have "TIMESLOTS AVAILABLE" listed next to the name of the study. If no studies have available timeslots, you may want to logon to the system a few days later to see if new timeslots have been added. You may also select a specific date to view studies with available timeslots on that date. Timeslots will also be available for the alternative to research participation.

Some studies are two-part studies, where you must sign up for both parts of the study at once, and the two parts must be scheduled a certain number of days apart. These studies will be clearly marked, and the system will ensure you are only able to sign up for timeslots with the appropriate amount of time between the first and second part.

To sign up to participate in a study or the research alternative, find the selection you would like (see Viewing Studies in this documentation). For more information about a study, click on the study name. You will see a list of any special restrictions or eligibility requirements, as well as a contact person if you have questions about the study. If the study has a principal investigator listed, you can click their name to view full contact details. In most cases, it is preferred to contact the person listed as the researcher if you have specific questions.
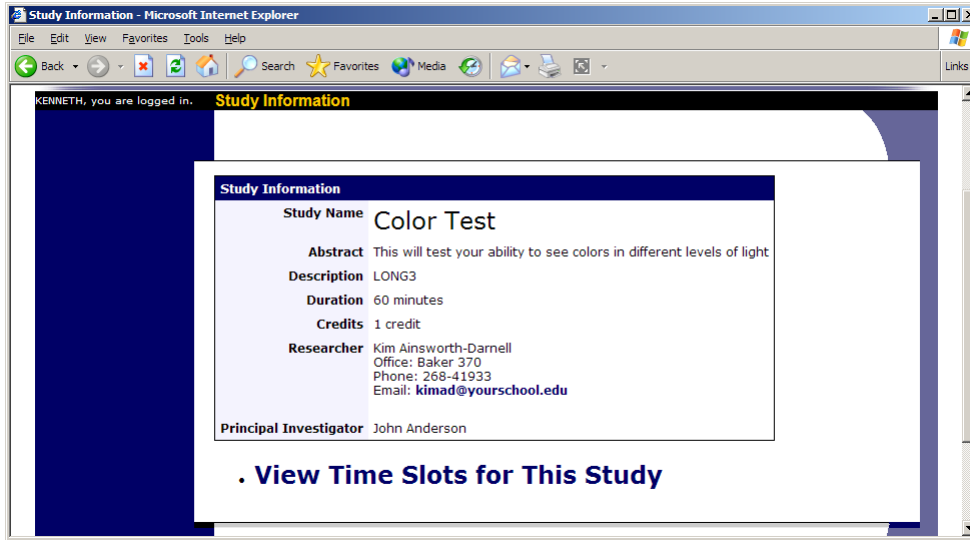

Figure 4 - Study Information

The sign-up and cancellation deadlines for the study or research alternative will be listed, and those are based on the date of each timeslot.

If you are viewing a study which you have signed up for in the past and already participated, and are not allowed to sign up for it again, then you will not see the list of timeslots for the study.

You may only sign up for a timeslot up until a certain time before that timeslot is scheduled to occur. The system will not show a Sign Up button for timeslots where it is too late to sign up. If you sign up for a timeslot and you already have another signup in the system that conflicts with that appointment time, the system will warn you of the scheduling conflict (though it will not prevent the sign-up).

When you are ready to sign up for a study or the alternative, click on View Timeslots for the selection and you will see a list of available timeslots. Choose a timeslot that is convenient for you, and click Sign Up.

After you click Sign Up, you will see information displayed confirming the time and location of the study you plan to participate in. You are now signed up for the study. To cancel your sign-up, see Canceling a Sign-Up in this documentation.
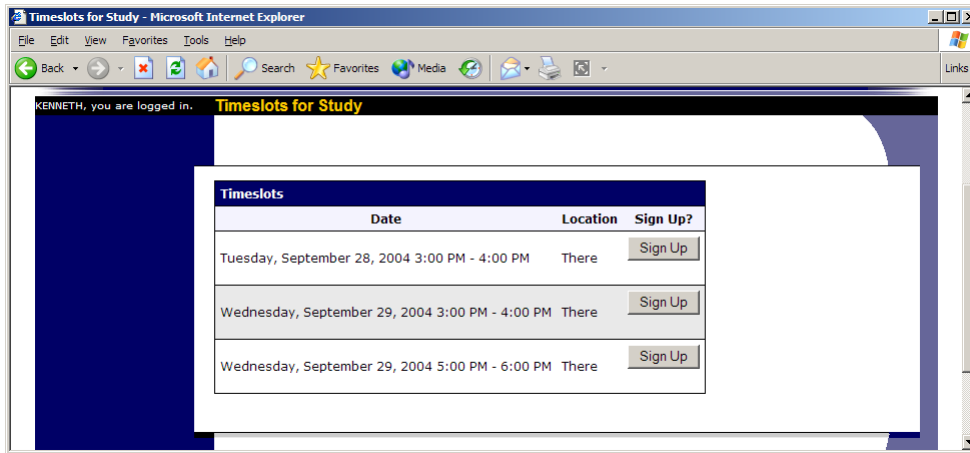
Figure 5 - Study Timeslots

Canceling a Sign-Up

If you need to cancel a timeslot you have signed up for, you can do this from the My Schedule and Credits page. Choose the My Schedule/Credits option from top toolbar.

You will see listed all the studies you have signed up for, as well as those you have completed (see the Tracking Your Progress section of this documentation for more information).

Studies you have signed up for that you are allowed to cancel will have a Cancel button next to them. There is a time limit before the study is to occur, when it is too late to cancel. This restriction may be listed at the bottom of the page, or can be found by clicking on the study name and viewing the study details.
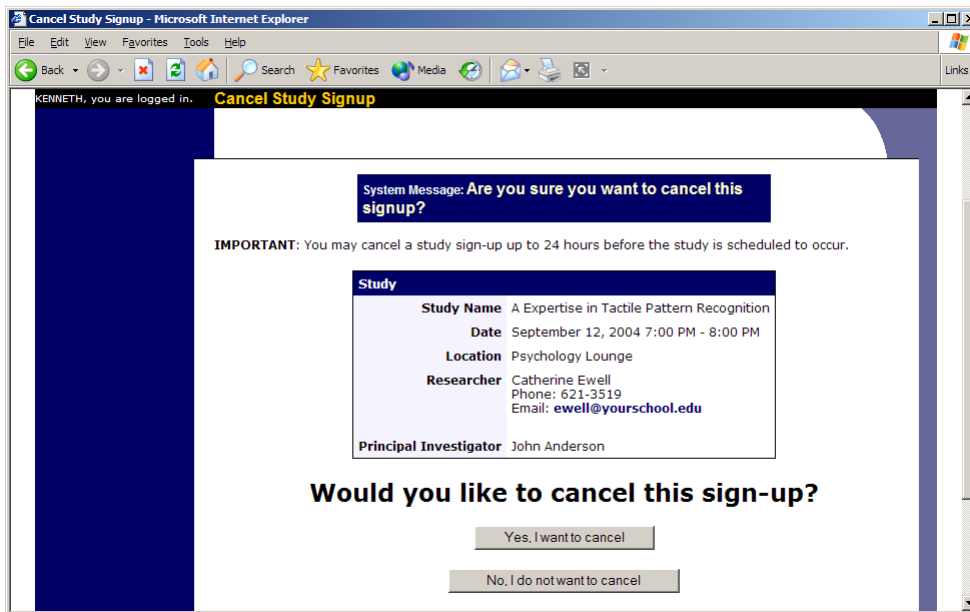

Figure 6 - Sign-Up Cancellation

Once you click Cancel to cancel your sign-up, you will see a confirmation page. Click Yes to cancel your sign-up, and the sign-up will be cancelled immediately.

Tracking Your Progress

You may track your progress at any time by choosing the My Schedule/Credits option from the top toolbar.

When you view this page, you will see at the top a list of the number of credits you are expected to earn, and how many you have earned so far. You may also have an option to view how many credits you have earned for each course. Below

that, if you have signed up for any studies, those are listed as well. In the list of studies, you will see information about your credit status.
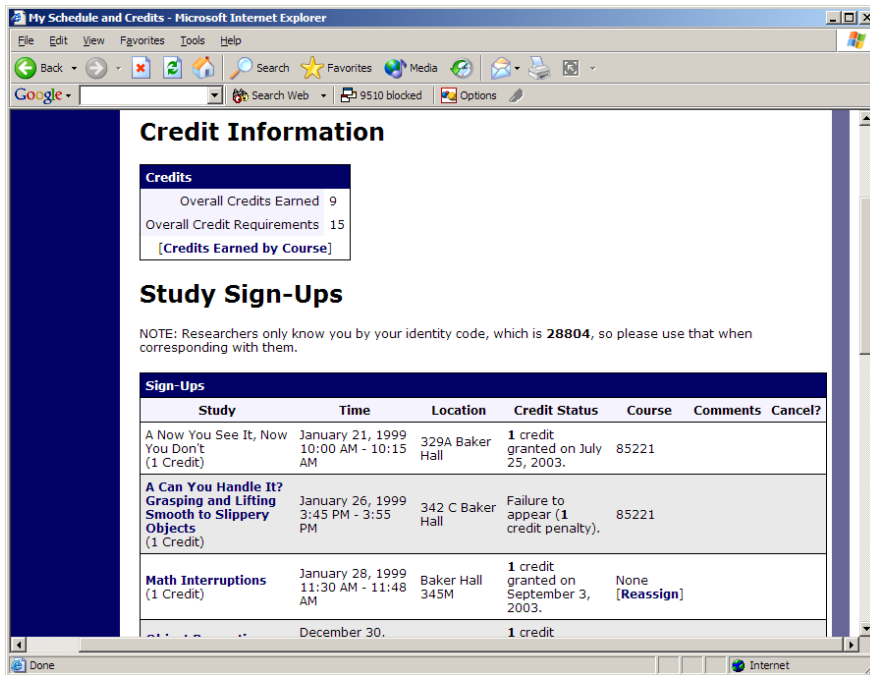

Figure 7 - Viewing Your Progress

Failing to cancel an appointment and not showing up will result in a loss of credits equivalent to the duration of the missed appointment (e.g., one credit would be lost for a missed one-hour appointment). Any credit loss due to a missed appointment can be made up by successfully completing another research appointment via the same subject pool at a later point in the same semester.

In the event that you show up for a scheduled appointment, but the research assistant or principal investigator responsible for the scheduled study does not show up, you will still receive credit for the scheduled session. To ensure that you receive credit in this situation, you should contact the subject pool administrator via the following email address:edps-research@ed.utah.edu.

Full completion of, or failure to complete, the research component of the course can only augment or reduce a student's course grade by a maximum of one grade level (e.g., B to B+, or reverse).

Credit for the alternative to participating in research studies is also listed as non-study credit.

Reassigning Credits

If you belong to multiple courses, you may reassign a credit from one course to another. To do this, simply use the Reassign link that appears when you view your progress. The link appears under the course entry for each item in your progress listing. You may not split a credit between two courses, for example by assigning 2 credits of a 3-credit study to one course, and 1 credit from that study to another course.