

## Sample Syllabus

### University of Nevada, Las Vegas Department of Educational Psychology

#### EPY 490/690 INTRODUCTION TO THE LEARNING SCIENCES (3 credits) Semester

Instructor: Dr. Michael Nussbaum  
Office: CEB 325  
Office Hours: Monday, 1-3 p.m.  
Phone: (702) 436-0289  
Email: nussbaum@unlv.nevada.edu

**Prerequisites:** Upper-division. The course is open to all undergraduate and graduate students in all disciplines.

**Course Description:** The learning sciences are concerned with formulating and testing principles underlying the design and assessment of learning innovations and alternative learning environments. The field is rooted in such disciplines as educational psychology, cognitive science, anthropology, applied linguistics, educational technology, and computer science. This course surveys the major aspects of the learning sciences, including research methodologies, learning technologies, collaborative learning, disciplinary learning, teacher learning, and policy design. There will be an emphasis on developing research questions, conducting literature reviews, and analyzing learning environments.

**Course Objectives:** The objectives of this course are for students to:

1. know the major concepts and methodologies use in the learning sciences;
2. understand the strength and weaknesses of at least one research methodology;
3. apply learning design principles in the analysis of learning environments.
4. be able to conduct a literature review on a topic in the learning sciences.

**Required Text:** Sawyer, R. K. (2014). *The Cambridge handbook of the Learning Sciences* (2<sup>nd</sup> ed). New York, NY: Cambridge University Press.

**Additional Readings:**

Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of the Learning Sciences*, 2(2), 141-178.

Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist*, 30(2), 116-127.

**Course Procedures:** Class sessions will primarily consist of group discussion of the assigned readings, plus student presentations of a learning innovation or environment germane to the weekly topic. There will also be occasional lectures.

**Academic Course Requirements:**

1. *WebCampus Question:* By noon on each day of class, you will need to email me (via Webcampus) a discussion questions related to the readings assigned for that day. The question should span more than one reading and show evidence that you completed the readings. This task must be performed every week except the first week and one week of your choosing. Active participation in class is vital to the success of this course.
2. *Methodology Paper:* A 5 to 7 page paper is required that explains a research methodology, illustrates how the methodology was used in an empirical research article, and analyzes the strengths and weaknesses of the methodology. You will also be required to present the content of your paper in class. Due Week #4.
3. *Analysis of Cross-Cutting Issue:* A 5 to 7 page paper is required that comments on and analyzes an issue that runs through many of the readings. You will need to formulate the issue yourself, develop a thesis and the supporting arguments, and explore counterarguments. Due Week #7
4. *Literature Review:* You will need to prepare a literature review regarding a question or issue that relates to the learning sciences. You will need to use key words to conduct a subject search, as well as perform an author search of key figures referenced in other articles. The literature review should be organized around an argument that answers the key question and/or provides a rationale for future research. The literature review should be 15-20 pages in length. Due Week #10. Only graduate students are required to complete the literature review.
5. *Analysis of a Learning Environment:* You are required to prepare a 10-page paper that analyzes a specific learning environment or innovation. The paper should describe the environment and innovation and analyze the learning design principles that it reflects (or that you can apply to it). Empirical research on the innovation or environment should also be presented, along with recommendations for future research. Due Week #13.
6. *Presentation of Learning Environment:* You will need to make a 15 minutes presentation/demonstration of the learning innovation or environment that you use for your paper. The presentation is made during the semester, before the paper is due, and will provide you with an opportunity to obtain the thoughts of your classmates on the learning environment. Student will sign up for the week in which they will make the presentation.

### **Administrative Course Requirements:**

1. *Class Attendance:* Attendance at all but two class sessions is required.
2. *Late Submissions:* The score on assignments submitted late will be reduced by 5-10% unless submitted late for health reasons.
3. *Resubmission:* Papers may only be resubmitted for a possible higher grade at the invitation of the instructor only.

### **GRADING**

This course must be taken for a grade Your final grade will be determined according to the percentages described above 100-95 = A, 94-90 = A-, 89-87 = B+, 83-87 = B, 82-80 = B-, 79-77 = C+, 73-76 = C, 70-72 = C-, 69-67 = D+, 63 –66 = D, etc.

#### **Weighting of Class Assignments Toward Final Grade (Graduate Students)**

Web-based Questions	20%
Methodology Paper	15
Cross-Cutting Issue Analysis	15
Literature Review	20
Learning Environment Analysis	20
Presentation	5
Class Attendance	5
TOTAL	100%

#### **Weighting of Class Assignments Toward Final Grade (Undergraduate Students)**

Web-based Questions	25%
Methodology Paper	15
Cross-Cutting Issue Analysis	20
Learning Environment Analysis	20
Presentation	10
Class Attendance	10
TOTAL	100%

## COURSE SCHEDULE

Week	Topic	Readings* and Assignments
1	Introduction	Chs 1 & 2
2	Foundational Concepts: Scaffolding, Cognitive Apprenticeships, Situativity	Chs 3, 6, & 7
3	Methodologies: Part 1	Ch 8 and one other (9-13): microgenetic, collaborative, video, assessment, data mining/analytics.
4	Methodologies: Part 2	Cronbach (1975)** Brown (1992)*** <b>Methodology Paper Due</b>
5	Problem- and Problem-Based Learning; Complexity	Chs 14-16
6	Technological Advances: Tangible Interfaces, Embodied Design, Video Gaming	Chs 17-19
7	Learning Together: Knowledge Building, Collaborative Learning, Argumentation, CSCL	Chs 20-22, 24 <b>Analysis Paper of Cross-Cutting Question Paper Due</b>
8	Museums, Mobile Learning, Virtual Worlds	Chs 23, 25, 26
9	Disciplinary Learning 1: Math, Science, Conceptual Change	Chs 27-28, 5
10	Disciplinary Learning 2: History, Literacy, Art	Chs 29-31 <b>Literature Review Due</b>
11	Moving Learning Science Research into The Classroom: Teacher Learning, Policy Design	Chs 32, 35
12	Cultural & Motivational Aspects of Learning	Chs 34, 33
13	Catch-Up	<b>Analysis Due of Learning Environment</b>
14	Conclusion	Ch 36 <b>Rewrites Due</b>

\*From Sawyer, unless otherwise noted.

\*\*Cronbach, L. J. (1975). Beyond the two disciplines of scientific psychology. *American Psychologist*, 30(2), 116-127.

\*\*\*Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *The Journal of the Learning Sciences*, 2(2), 141-178.

## LEGAL STATEMENTS

**DISABILITIES RESOURCE CENTER (DRC):** The DRC (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel you have a disability, please make an appointment with a Disabilities Specialist at the DRC to discuss what options may be available to you.

If you registered with the UNLV Disability Resource Center, bring your Academic Accommodation Plan from the DRC to the instructor during office hours so that you may work together to develop strategies for implementing the accommodations to meet both your needs and the requirements of the course. Any information you provide is private and will be treated as such. To maintain the confidentiality of your request, please do not approach the instructor in front of others to discuss your accommodation needs.

**ACADEMIC MISCONDUCT:** Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism: "Using the words or ideas of another, from the Internet or any source, without proper citation of the sources." See the *Student Academic Misconduct Policy* (approved December 9, 2005) located at: <http://studentconduct.unlv.edu/misconduct/policy.html>

**COPYRIGHT:** The University requires all members of the University Community to familiarize themselves **with** and to follow copyright and fair use requirements. **You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright/>

**TUTORING:** The Academic Success Center (ASC) provides tutoring and academic assistance for all UNLV students taking UNLV courses. Students are encouraged to stop by the ASC to learn more about subjects offered, tutoring times and other academic resources. The ASC is located across from the Student Services Complex. Students may learn more about tutoring services by calling (702) 895- 3177 or visiting the tutoring web site at: <http://academicsuccess.unlv.edu/tutoring/>

**RELIGIOUS HOLIDAYS POLICY:** Any student missing class quizzes, examinations, or any other class or lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the end of the first two weeks of classes, **XXX**, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

**INCOMPLETE GRADES:** The grade of I – Incomplete – can be granted when a student has satisfactorily completed three-fourths of course work for that semester/session but for reason(s) beyond the student’s control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. The incomplete work must be made up before the end of the following regular semester for undergraduate students. Graduate students receiving “I” grades in 500-, 600-, or 700- level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

**REBELMAIL:** By policy, faculty and staff should e-mail students’ Rebelmail accounts only. Rebelmail is UNLV’s official e-mail system for students. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the university. Students’ e-mail prefixes are listed on class rosters. The suffix is always @unlv.nevada.edu. Emailing within WebCampus is acceptable.

**UNLV WRITING CENTER:** One-on-one or small group assistance with writing is available free of charge to UNLV students at the Writing Center, located in CDC-3-301. Although walk-in consultations are sometimes available, students with appointments will receive priority assistance. Appointments may be made in person or by calling 702-895-3908. The student’s Rebel ID Card, a copy of the assignment (if possible), and two copies of any writing to be reviewed are requested for the consultation. More information can be found at: <http://writingcenter.unlv.edu/>