**Tentative Syllabus: Computer Skills for the Research Lab, SLHS 497 / 597**

(1 credit)

Instructor: Dianne Patterson, Ph.D.
Office: Speech and Hearing Science, 314
Cell: 1-520-270-0491
dkp@email.arizona.edu
Office Hours: I have an open door policy. I'm usually around in the afternoons. You are always welcome to stop in.

Class is held on Tuesdays, 3:30-5pm in SLHS Room 201.
1.5 hours class, 1.5 hours homework per week

**Course Description:**
SLHS research labs need computationally competent students. Students must be comfortable enough with computers to determine whether the machines, network and software are working correctly, and to identify and solve or avoid common problems. This course provides fundamental concepts, vocabulary and advice to enable students to be more confident, productive and organized members of the research lab. Weekly homework and in-class feedback will reinforce new concepts and allow us to identify and resolve any confusion. Students will learn about the internal parts of the computer, networking, operating systems, audio, image and video formats, programming concepts, best practices in informatics, databases, principles of good presentation and more.

This course is ideal for students who would like to work in a research lab, or who would like to improve their abilities to contribute to research by improving their technical expertise.

This is a tentative syllabus. Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor. For example, we may need to spend more, or less time on a particular topic than projected in the syllabus.

**Course Objectives:**
- To provide you with the fundamental concepts and vocabulary related to computer hardware, software and networking
- To provide you with hands on experience with hardware and troubleshooting so that you can solve hardware and software problems yourselves
- To guide you toward best practices and appropriate software tools for organizing, documenting and presenting materials in a research lab.
Absence and Class Participation Policy:
The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable: http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences preapproved by the UA Dean of Students (or dean’s designee) will be honored. See http://policy.arizona.edu/employmenthuman-resources/attendance.

Participating in the course and attending lectures and other course events is vital to the learning process. As such, attendance is required at all lectures and discussion section meetings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

Grading:
180 points possible:
162-180=A
144-161=B
126-143=C
108-125=D

Homeworks: 12 homeworks from 3-19 points (135 points)
Class participation: 15 @ 1 point each (15 points)
Final project: 30 points (you MUST complete a final project to receive a grade for the class)

Extra credit homework may be offered. Graduate students will be expected to do higher quality work and will have some extra learning goals.

Assignments are expected on time, or they won’t be graded.

Regrading: If you feel that a grade is inappropriate, you may come see me in my office to discuss it, but the grade might go up or down as the result. You have 3 days after I return your assignments to contact me if you want your grade to be reconsidered. This applies only to homeworks, not the final project.

In class: Every day at the end of the lecture, answer the following questions (and hand it in):
-What, if anything, was confusing today?
-What, if anything, was the most useful (or interesting) thing you learned today?
What, if anything, would you like to know more about?

Homeworks: These are intended to reinforce and expand on material covered in class. You should write in complete sentences and provide references (including web addresses). **You will be graded on grammar.** You should reference the source of information whether or not you quote it directly. Make sure you address each numbered portion of the homework. You will lose points if you skip a section. I may ask you to revise the homework if I think you are missing an important concept. Make sure that you provide details that demonstrate that you really took the time to learn something. Homework should be turned in via D2L and also as hardcopies delivered to my box (or my office). Certain homework materials (i.e., submitted audio, video or excel materials only need to be submitted on D2L. All homework should be delivered by 2pm on the day before the next class (this gives me time to read them and prepare extra materials to address any confusion).

Final Examination or Project:
There is no final exam.

Final Project:
Learning Goal: I want you to push your skills and solve a technical problem. What follows are suggestions. Learn to use some technology (hardware or software or both) that interests you and/or is relevant to your career in SLHS. Final project topics must be approved.

Due Date: This will be due on the final exam day, at the time of the final exam...turned in via D2L. You must complete a final project to get a grade.


Required Texts:
There are no required texts.

Student Behavior:
I expect you to engage in the class. Please don’t spend your time texting, talking on the phone, listening to music or emailing.

Policy Against Plagiarism and Academic Code of Integrity: [http://deanofstudents.arizona.edu/codeofacademicintegrity](http://deanofstudents.arizona.edu/codeofacademicintegrity)
Policy against threatening behavior by students: [http://policy.web.arizona.edu/threatening-behavior-students](http://policy.web.arizona.edu/threatening-behavior-students)

Nondiscrimination and Anti-harassment Policy: State the University Policy 200E on prohibited behaviors: [http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy](http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy)
Accessibility and Accommodations:
It is the University’s goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations. [drc.arizona.edu/instructors/syllabus-statement](drc.arizona.edu/instructors/syllabus-statement)

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**Day 1** Review syllabus. In class pretest. Class picture.
**Day 2** Connections: cables and ports (hands on)
**Day 3** Computer Architecture: Introduces ram, cpu, storage, talks about throughput as a function of speed and bus size.
**Day 4** Measuring the size and speed of computer components
**Day 5** Computer Internals (hands on)
**Day 6** File Systems and Operating Systems
**Day 7** Networking concepts
**Day 8** Software concepts
**Day 9** Informatics
**Day 10** Digital Media *(Images, audio and video)*
**Day 11** Digital Media
**Day 12** Digital Media
**Day 13** Digital Media
**Day 14** Microsoft Office
**Day 15** Presentation design principles