ED 676 Supporting Learning in Diverse Systems
3 Credits
Instructor: TBA
Contacts: Office Phone 907.474.7341
Office Hours: By appointment
Meeting time & location: Web-based

Catalog Description/Course Description
Provides students with the skills necessary to support student learning in a variety of managed and unmanaged computing environments. Students will explore methods of local and remote support, perform tasks to ensure an optimal managed learning environment for students and teachers, and create documentation for student and teacher use. Finally, students will step through the entire process of taking an idea for improving their learning environment by evaluating, implementing, and instructing use of a solution of their choice. (3 credits)

Prerequisites
Students must either be admitted to the Master of Education in Instructional Technology Innovation program or obtain instructor permission to enroll in this course. Instructor approval for MITI program courses is based on equivalent class work or work performance demonstration.

Students will choose to follow either a Macintosh track or a Windows track based on their existing knowledge and potential future experiences. To be successful in this course, you should have intermediate or better computer skills in your target track. You do not need to have experience in a formal IT role, but you should be comfortable with performing administrative tasks, troubleshooting and solving problems, and have some basic server administration skills.

Instructional Methods
This course will be taught entirely via distance delivery. Blackboard will be used for posting grades, Elluminate will be used for live sessions with the instructor and peers, your portfolio will be used for posting final versions of assignments, and your blog will be used to solicit and receive feedback.

Course Goals
The primary objective for the course is to develop and practice skills in supporting managed and unmanaged technological environments for student learning. Students will work on a variety of assignments which will be incorporated in to a large final project that will demonstrate their ability to implement a realistic scenario.

Student Learning Outcomes:

- demonstrate ability to choose which remote assistance solutions are appropriate for a given situation, install, configure, and instruct students on use.
- create images and perform imaging in a managed environment.
- create software packages for deployment locally and remotely, managed and unmanaged.
- create and maintain a secure (yet still usable for your target users) managed environment.
- create, distribute, and execute scripts to automate administrative tasks.
- perform proactive monitoring and maintenance of labs.
- receive requests from users (students, teachers, administrators) for new solutions, evaluate options and design a plan for implementation.

Alignment with School of Education Mission
The School of Education prepares educators to work in urban and rural Alaska and to work with K-12 students from many backgrounds, with a particular focus on Alaska Native languages and cultures. We are particularly committed to enhancing the educational opportunities for Alaska's rural and Native populations. Through the UAF rural campuses, we are responsive to local and regional needs

within the state.

Through our programs and professional development courses, we promote the following goals:

- Increase the number of qualified educators for Alaska's schools
- Enhance the professional skills of Alaska's K-12 educators
- Develop and support ongoing systemic educational collaborations with Alaska schools and communities
- Conduct collaborative research on cross-cultural and multicultural education

This course supports the UAF School of Education's mission by providing students with the skills necessary to design thoughtful individualized instructional environments utilizing technologies and strategies appropriate to all learners. Students will acquire skills in the management and implementation of technology that will enhance their professional qualifications based on ISTE and Alaska teacher standards for technology and instructional design.

Required Textbooks:
Choose from either the Macintosh or Windows track, whichever is appropriate.

Macintosh Track:

White, K. M. (2009). Apple training series: Mac OS X deployment v10.6: A guide to deploying and maintaining Mac OS X and Mac OS X software. Apple training series (1st ed.). Berkeley, CA:

White, K. M. (2008). Apple training series: Mac OS X deployment v10.5. Apple training series (2nd ed.). Berkeley, CA: Peachpit Press.

Windows Track:

Moskowitz, J. (2010). Group policy: Fundamentals, security, and the managed desktop. Indianapolis, IN: Sybex.

Moskowitz, J. (2008). Creating the secure managed desktop: Using group policy, SoftGrid, Microsoft deployment toolkit, and other management tools. Indianapolis, IN: Sybex.

Amaris, C., Kopczynski, T., Minty, A., & Morimoto, R. (2010). Microsoft system center enterprise suite unleashed (1st ed.). Indianapolis, IN: Sams.

Note: There will also be assigned articles and additional readings throughout the semester.

Evaluation Policy:
Grading of assignments will be based on a 5-point rubric with 0-4 points available. There are 7 assignments for a possible total of 28 points. The final assignment will be worth 0-8 points.

The following grading scale applies:
36 points: A
32-35 points: B
25-31 points: C
21-24 points: D
Below 21 points: F

When you submit an assignment, you have essentially begun a conversation with the instructor. That conversation ends when you are satisfied with the evaluation. The instructor will review and comment on each assignment and you are free to revise and resubmit as often as needed. Most assignments will also undergo a peer review process before they are included in your portfolio.

Writing Standards
Citations and references should adhere to the American Psychological Association (APA) Formatting and Style Guide. Additionally, all of your blog and portfolio submissions will be evaluated for proper spelling and grammatical usage.

Plagiarism and Academic Honesty
Plagiarism is using what another person has developed as your own words or thoughts. Plagiarism is never acceptable. UAF requires students to conduct themselves honestly and responsibly and to respect the rights of others. Cheating, plagiarism or other forms of academic dishonesty may result in disciplinary action and sanctions.

The UAF Student Code of Conduct is adhered to in this course.
The primary objective for the course is to develop and practice skills in supporting managed and unmanaged technological environments for student learning. Students will work on a variety of assignments which will be incorporated in to a large final project that will demonstrate their ability to implement a realistic scenario.

Disability Services
The UAF Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. Your instructor will work with the Office of Disability Services (203 WHIT, 907-474-5655) to provide reasonable accommodation to students with disabilities.

UAF Disability Services for Distance Students
UAF has a Disability Services office that operates in conjunction with the College of Rural and Community Development (CRCD) campuses and UAF Center for Distance Education (CDE). Disability Services, a part of UAF Center for Health and Counseling, provides academic accommodations to enrolled students who are identified as being eligible for these services. If you believe you are eligible, please visit the Office of Disability Services on the web or contact a student affairs staff person at your nearest local campus. You can also contact Disability Services on the Fairbanks Campus at (907) 474-7043, fydso@uaf.edu.

Student Services
The Division of Student Services provides student-centered programs and services designed to assist students in achieving their personal, academic and career goals. In collaboration with the academic deans, we lead the university in recruiting a diverse student body. With the use of ongoing assessment we support and develop programs and communities that contribute to the retention, success and leadership development of students. Go to http://www.uaf.edu/ses/ to learn more.

Course Calendar and Assignments:

Week 1 & 2:
Read:
Chapter 2.4 in *Take Control of Screen Sharing in Snow Leopard* by Glenn Fleishman (has information for both Mac and Windows) and relevant chapter (Skype, VNC, etc) to most appropriate solution for your environment from same book.

-Blog about which remote support solution you would prefer, focusing on advantages of it, difficulties you may encounter and potential solutions to them, and comment on another student's blog.
-Hold remote support session with instructor and use screen sharing to accurately diagnose common problem.

Week 3 & 4:
Read:
Macintosh track: Chapter 4 and Chapter 5 from *Mac OS X Deployment 10.6* or Chapter 4, 5, and 6 from *Mac OS X Deployment 10.5*
Windows track: Chapter 4 from *Microsoft System Center Enterprise Suite Unleashed* and Chapter 1 from *Creating the Secure Managed Desktop*

-Blog about advantages and disadvantages to using local vs. remote imaging and considerations for both, and comment on another student's blog.
-Step through process of creating and deploying local system image. Blog about your experience, noting things that worked/did not work as expected, and comment on another student's blog.

Week 5 & 6:
Read:
Macintosh track: Chapter 3 from *Mac OS X Deployment 10.5* or *Mac OS X Deployment 10.6*
Windows track: Chapter 11 from *Group Policy Fundamentals*

-Blog about situations in which a modified installer package would be beneficial in your environment, noting advantages and disadvantages for deployment of modified installer packages vs. using MCX/Group Policies. Comment on another student's blog.
-Create an installer package that is modified from the original source (for example, a network application that includes a preference file that has site-specific connection information). -
-Successfully deploy package and test for modification.

Week 7 & 8:
Read:
Macintosh track: Chapter 2 and Chapter 3 from *Foundations of Mac OS X Leopard Security*
Windows track: Chapter 8 from *Creating the Secure Managed Desktop*

-Blog about balancing security and usability in your environment (for example, allowing an exemption in the password length/complexity policies for K-5 students). Comment on another student's blog.
-Demonstrate knowledge of security best practices for a managed computer by designing an ideal security environment for your managed computers/devices, focusing on client policies (not server/firewall security). After review/revision, publish to your portfolio as "Best Practices for Security in my Learning Environment".

Week 9 & 10:
Read:
Macintosh track:
Required: Chapter 6 **and** Chapter 7.6 (Automating System Maintenance Scripts) from *Mac OS X Deployment 10.6* **or**
Chapter 6 **and** Chapter 7.2.4 from *Mac OS X Deployment 10.5*
Supplemental: Chapter 18.1, 18.2, and 22 from *Learn Mac OS X Snow Leopard*
Windows track: Chapter 12 and Bonus Chapter 1 from *Group Policy Fundamentals*

-Blog about methods in which scripting could be used to assist the administrator and the users.
-Comment on another student's blog.
-Create a script that automates an administrative task (for example, a script that empties the trash upon user logout, or performs software updates on Tuesday evenings), and a script that automates a user process (for example, a user-launchable script that opens a specific web browser and automatically navigates to a specific URL which includes the username) and demonstrate the steps to schedule/implement.

Week 11 & 12:
Read:
Macintosh track: Remainder of Chapter 7 from *Mac OS X Deployment 10.6* **or** *Mac OS X Deployment 10.5*
Windows track: Chapter 8 from *Microsoft System Center Enterprise Suite Unleashed*

-Demonstrate knowledge of proactive monitoring practices by testing and implementing a solution that you would find beneficial.
-Blog about method of proactive monitoring that you implemented, focusing on strengths and drawbacks of that solution. Comment on another student's blog.

Week 13 & 14:
Read: *A Practical Process for Reviewing and Selecting Educational Software*
Choose your topic for Capstone assignment. Identify and evaluate potential solutions. Blog about the process used to identify potential solutions (for example, contacting vendors, looking at similar environments with a solution already in place) and challenges encountered. Comment on another student's blog.

Week 15 & 16/Capstone Assignment:
Students should be working on all previous assignments with this capstone assignment in mind. If you do not have a potential problem/solution to focus your assignments on, you should consider contacting service groups in your area (Kiwanis, Boys & Girls Club, etc) and find out if they are facing any potential problems for you to tackle.
If you cannot find one, a problem will be posed by the instructor that is most relevant to your potential area of focus: K-12, higher education, corporate, or non-profit and track. Your administrator would like students to have the ability to have an (x). Identify potential solutions that may already exist in your environment (for example, if you already have a product that may partially meet the need) as well as outside solutions and academic research that has been conducted.
Create an evaluation of potential solutions in an easy (for non-technical people) to understand (for example, a table with Benefits and Drawbacks identified for each potential solution). Test potential solution with supported clients (for example, will mobile phone browsers be supported? Will Windows XP or Mac OS X 10.4 [vintage software] still be in common use in your environment?)

After reaching a decision, identify any requirements that may need to be met (for example, does hardware have to be purchased? does a server need an OS upgrade?) before deployment can begin. Identify any impacts to security (for example, do ports in the firewall have to be opened, or does the client software require administrator rights to be run?) and make a plan to address these (for example, open those ports only for a specified range of IP addresses or test solution as Power User).
If appropriate, create installer packages for software that must be installed on the client machines. Automate a method for distributing ease-of-use tools to client machines (for example, if solution is web-based, create a shortcut to the website and deploy it to student desktops). State policy on system monitoring. Create end-user documentation on beginning to use solution (demonstrating your ease-of-use tool). After revision/review, publish to your portfolio as "Learning Software Selection from A-Z". Blog about the experience and comment on another student’s blog.