

ED 676 Supporting Learning in Diverse Systems

3 Credits

Instructor: TBA (Dr. Roy Roehl)

Contacts: Office Phone 907.474.7341

Office Hours: By appointment

Meeting time & location: Instructor led/web based meeting times/due dates will be at Alaska Standard Time (AST)

Prerequisites:

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

Required Textbooks:

Choose from either the Macintosh or Windows track.

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: Peachpit Press.

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.

Supplemental Readings: There will also be assigned articles and additional readings throughout the semester, these will be customized to meet the students particular scenario.

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)

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.

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.

Course Goals:

1. To recognize/understand the fundamentals of configuring and maintaining a LAN configuration.
2. Develop the skills required for supporting a managed and unmanaged technical environment.
3. Analyze, and implement proper security protocols for a managed system.
4. Assess a given technical environment and offer technical solutions to non-technical colleagues.
5. Utilize remote assistance tools to develop procedures for off-site support.

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 disk, software, and support images for a managed environment.
- create software procedures for deployment locally and remotely, managed and unmanaged.
- create and maintain a secure usable managed environment to meet your users needs.
- create, distribute, and execute scripts to automate administrative tasks.
- perform proactive monitoring and maintenance of labs.
- analyze requests from users for usage patterns, evaluate options, offer solutions, and design a plan for implementation.

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. There be a minimum of 3 synchronous meetings.

Course Calendar and Assignments:

Week	Topic	Assignments	Readings
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1-2	<p>Remote Support Tools</p> <p>Analyze existing options</p> <p>Install, test and utilize a given package</p>	<p>-Configure remote support tools</p> <p>-Hold remote support session with instructor.</p> <p>-Utilize remote screen sharing to accurately diagnose and solve a given technical problem.</p> <p>Blog Topic: Discuss which remote support solution you utilized, focusing on the advantages of it, and any difficulties you encountered and the solutions to them.</p>	<p>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.</p>
3-4	<p>Disk images: What are they? What is their purpose? What are the issues in creating them? What scenarios illicit their creation and deployment?</p>	<p>-Create a disk image</p> <p>-Test the disk image for integrity</p> <p>-Properly deploy the disk image.</p> <p>Blog Topic: Discuss the advantages and disadvantages to using local vs. remote imaging. Also discuss your experience, noting what worked and did not work.</p>	<p>Macintosh track: Chapter 4 and Chapter 5 - <i>Mac OS X Deployment 10.6</i> or Chapter 4, 5, and 6 - <i>Mac OS X Deployment 10.5</i></p> <p>Windows track: Chapter 4 from <i>Microsoft System Center Enterprise Suite Unleashed</i> and Chapter 1 <i>Creating the Secure Managed Desktop</i></p>
5-6	<p>Installer packages: Out of the box set-ups. How can we modify these packages to meet our specific needs, and what are the considerations of such modifications?</p>	<p>-Create an installer package that is modified from the original source (i.e a network application that includes a preference file that has site-specific connection information).</p> <p>-Successfully deploy package and test for modification.</p> <p>Blog topic: Describe and discuss the 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.</p>	<p>Macintosh track: Chapter 3 <i>Mac OS X Deployment 10.5</i> or <i>Mac OS X Deployment 10.6</i></p> <p>Windows track: Chapter 11 <i>Group Policy Fundamentals</i></p>

7-8	Security environments: Researching, designing, and deploying the proper security solution for environment.	<p>- Design an ideal security environment for your managed computers/devices, focusing on client policies (not server/firewall security). Demonstrate knowledge of security best practices for a managed computer system. This will take the form of a 8-10 page presentation that will have documented sources, diagrams, and graduate level writings to explain the scenario and proposed solutions.</p> <p>Blog Topic: Discuss balancing security and usability in your environment (i.e. Allowing an exemption in the password length/complexity policies for K-5 students).</p>	<p>Macintosh track: Chapter 2 and Chapter 3 <i>Foundations of Mac OS X Leopard Security</i></p> <p>Windows track: Chapter 8 <i>Creating the Secure Managed Desktop</i></p>
9-10	Customizing scripts and how these scripts can automate a variety of administrative tasks.	<p>-Create a script that automates an administrative task (for example, a script that empties the trash upon user logout, or performs software updates across the network on a given time).</p> <p>Blog Topic: Discuss the methods in which scripting could be used to assist the administrator and the users.</p>	<p>Macintosh track: Required: Chapter 6 and Chapter 7.6 (Automating System Maintenance Scripts) <i>Mac OS X Deployment 10.6 or</i> Chapter 6 and Chapter 7.2.4 <i>Mac OS X Deployment 10.5</i> Supplemental: Chapter 18.1, 18.2, and 22 <i>Learn Mac OS X Snow Leopard</i></p> <p>Windows track: Chapter 12 and Bonus Chapter 1 <i>Group Policy Fundamentals</i></p>
11-12	Systems monitoring: Issues regarding testing and implementing a user work station monitoring system.	<p>-Test and implement a lab or network based user monitoring system.</p> <p>Blog Topic: Discuss the method of proactive monitoring that you implemented, focusing on strengths and drawbacks of that solution.</p>	<p>Macintosh track: Remainder of Chapter 7 <i>Mac OS X Deployment 10.6 or Mac OS X Deployment 10.5</i></p> <p>Windows track: Chapter 8 <i>Microsoft System Center Enterprise Suite Unleashed</i></p>
13	Capstone Activity: This summarizing activity will draw upon your previous	<p>Choose your topic for Capstone assignment.</p> <p>Blog Topic: Describe your</p>	<p><i>A Practical Process for Reviewing and Selecting Educational Software</i></p>

	research and work to solve a large encompassing issue.	capstone project, clearly indentify and discuss the issue your attempting to solve and your proposed solution and resulting deployment procedures.	
14-15	Capstone: Project scenario, development of solution, deployment, and primary issues with pro's and con's.	<p>-Create a Google site that documents your scenario, offers in-depth development of the solutions, with accompanying deployment and substantive discussion of the pro's and con's of the end result.</p> <p>Blog Topic: Briefly revisit the scenario and offer an in-depth evaluation of the development and deployment of the suggested solution.</p>	Student will utilize their previous readings to assist in the development and deployment of the solution to their selected scenario.

Course Policies:

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.

Academic Honesty: The University of Alaska Fairbanks policies are in effect in this class. Academic honesty is required of all members of a learning community. Unethical behavior such as plagiarism or using others' work without appropriate acknowledgement in presentations, papers, or other course assignments is not tolerated.

Research must be conducted in a professional manner, this includes the write-up and citations regarding the write-ups.

Students who fail to follow academic integrity policies may be given failing grades. Plagiarism is the appropriation or imitation of the language or ideas of another person and presenting them as one's original work.

If you are uncertain about proper documentation of sources or citations, please discuss this with me. If you quote or paraphrase someone else's ideas, opinions, theories, evidence, or research you must give the source credit.

Ethics, Professional Conduct Courtesy and respect for others is an expected norm in any setting and is the norm at the University of Alaska Fairbanks. The use of the American Psychological Association (APA) approved guidelines for ethical behavior is actively encouraged in regard to respectful language usage (i.e., gender, age, ableness, sexual orientation, race, ethnicity, nationality, or other cultural factors).

The [UAF Student Code of Conduct](#) is adhered to rigorously 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.

Evaluation:

Student grades will be based upon the following criteria:

100%-90% A, 89%-80% B, 79% - 70% C 69% - 60 % D, 59% and below is an F

Class participation/ Posting	100 points
Remote Assistance Deployment	100 points
Creation and deployment of software images.	100 points
Installer Packages	100 points
Security Tools	100 points
Custom Scripts	100 points
System Monitoring	100 points
Capstone Project	300 points
Total Points	1,000 points

Assignments General Rubric ED 676

All assignments will be evaluated by the following criteria. These criteria must be clearly documented for each assignment. These criteria were developed to match the processes you will be developing as you complete this course. If you have any questions about how these criteria apply to any specific assignment please contact me BEFORE you submit your work for grading.

Statement of issue and solution overview-15%

Exemplary: (A) Statement of issue generates interest and describes the context of the unit. The overview introduces the review in an interesting way, explaining its appropriateness for the study. The review objectives are clearly articulated and measurable and are explicitly linked to major theme of the project. The scenario content is described in general terms and its importance to the student's future study. Availability of resources is noted. Context speaks to previous knowledge and attitudes toward the subject. Any perceived special connections or topics are noted.

Proficient: (B) Statement of issue describes the content of the unit but is not particularly clear in the description. The overview introduces the unit by describing content and its place in the study as a whole. The objectives of the unit are stated in measurable terms. The reader is left to determine a connection between the topics.

A description of connections to other topics is included but justification for choices is limited. The description of the context in which the study is to serve the students future study goals is limited.

Adequate: (C) Statement of issue is present but does not engage the reader nor is it particularly descriptive of unit content. The overview explains only briefly why this study is included in the course and describes content in a limited way.

The content of the unit is described in general terms .All study objectives may not be measurable. Literature connections are stated but are not linked. The assessment approach is described but is not justified. The context gives limited or cursory connections.

In-adequate: (D) Statement of issue is not clearly present and does not engage the reader nor is it particularly descriptive of unit content. The overview offers a cursory explanation only briefly why this study is included in the course and describes content in a limited way.

The content of the unit is described in vague terms .All study objectives may not be measurable. Literature connections are not fully stated but are not linked. The assessment approach is described but is not justified. The context gives limited or cursory connections.

Failing: (F) Statement of issue is not present or it is not descriptive of unit content. The overview offers a no explanation of why this study is included in the course and does not describe content

The content of the unit is not described and study objectives may not be measurable. Literature connections are not linked. The assessment approach is not described or is not justified. The context is not clear or not present.

Research Development and Deployment Approach-60%

Exemplary: (A)

Contains 90% or above of the following elements:

- Introduction
- Literature reviewed
- Statement of the problem or “intellectual puzzle”
- Research question (s)
- Theoretical framework (what theoretical assumptions is your work grounded in?)
- Methods selected and why
- Findings Analysis/Interpretation
- Conclusion/Implications/Suggestions for further research
- Reflection: What would you do differently next time?
- Appendices (if applicable)

A reflective commentary follows each scenario

Proficient: (B)

Contains 80% of the following elements.

- Introduction
- Literature reviewed
- Statement of the problem or “intellectual puzzle”
- Research question (s)
- Theoretical framework (what theoretical assumptions is your work grounded in?)
- Methods selected and why
- Findings Analysis/Interpretation
- Conclusion/Implications/Suggestions for further research
- Reflection: What would you do differently next time?
- Appendices (if applicable)

A reflective commentary follows each scenario

Adequate: (C)

Contains 70% of the following elements:

- Introduction
- Literature reviewed
- Statement of the problem or “intellectual puzzle”
- Research question (s)
- Theoretical framework (what theoretical assumptions is your work grounded in?)
- Methods selected and why
- Findings Analysis/Interpretation
- Conclusion/Implications/Suggestions for further research
- Reflection: What would you do differently next time?
- Appendices (if applicable)

A reflective commentary follows each scenario

Inadequate: (D)

Contains 60% of the following elements:

- Introduction
- Literature reviewed
- Statement of the problem or “intellectual puzzle”
- Research question (s)
- Theoretical framework (what theoretical assumptions is your work grounded in?)
- Methods selected and why
- Findings Analysis/Interpretation
- Conclusion/Implications/Suggestions for further research
- Reflection: What would you do differently next time?
- Appendices (if applicable)

A reflective commentary follows each scenario

Failing Grade: (F)

Contains 50% or less of the following elements:

- Introduction
- Literature reviewed
- Statement of the problem or “intellectual puzzle”
- Research question (s)
- Theoretical framework (what theoretical assumptions is your work grounded in?)
- Methods selected and why
- Findings Analysis/Interpretation
- Conclusion/Implications/Suggestions for further research
- Reflection: What would you do differently next time?
- Appendices (if applicable)

A reflective commentary follows each scenario

Responses—25%

Exemplary: (A) The self-evaluation reflects both cognitive and affective learning through the experience. The piece emphasizes successes and speaks to ways to make changes in the next scenario. It summarizes and analyzes the experience and indicates lessons learned for future research/decision making.

Proficient: (B) The self-evaluation reflects on the experience. The piece emphasizes successes and speaks to ways to make changes in the next scenario to be applied to future research/decision-making are apparent.

Adequate: (C) The self-evaluation reflects on the experience. It implies that lessons were learned but does not necessarily explain how the experience will affect future research/decision-making.

In-adequate: (D) The self-evaluation vaguely reflects on the experience. It implies that lessons were learned but does not explain how the experience will affect future research/decision-making.

Failing: (F) The self-evaluation does not reflect on the experience. It does state that lessons were learned or does not explain how the experience will affect future research/decision-making.

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.

The Center for Distance Education provides student service support for this online course. See their website at: <http://distance.uaf.edu>

Writing support services are available to UAF students through the Writing Center, located in 801 Gruening, 474-5314, online at: <http://www.alaska.edu/english/studentresources/writing/>. You are encouraged to use this resource to meet writing expectations.

Technology support services are available through the OIT Support Center, 450-8300 (Toll Free: 800-478-8226), online at: <http://www.alaska.edu/oit/sc/about/contact.xml>, and via email to helpdesk@alaska.edu.

Disability Services:

UAF offers many services for students with disabilities. If you require information regarding these services. Their URL is <http://www.uaf.edu/apache/disability/> or you can contact them at 208 WHITAKER BLDG, 474-5655. I will work with Office of Disability Services in providing any reasonable accommodations, please notify me of any such requirements as soon as possible.