ISAT 224 – Section 001  
LAN Installation and Administration  
Spring 2015

Instructor: Brad Hagy, Senior Lecturer  
School of Information Systems and Applied Technologies, SIUC

Office: ASA Building Room 117  
Phone: 618-453-8887  
email: bradh@siu.edu

Office Hours: Tuesday, Thursday: 9:00 -9:30a.m, 12:15-1:00pm, 3:00-3:30pm Wednesday: 11-3pm

Location: Class room ASA 204B  
Meeting Time: Tuesday and Thursday, 1:00. – 2:50p.m.

Course Description: 
This course will introduce both Linux and Windows operating systems, from a user and an administrator standpoint. Basic monitoring, optimizing, and troubleshooting tools will be utilized to understand and manipulate a PC (or Mac). The student will also create a Linux server.


Prerequisites to: ISAT 335

Supplies: SIU e-mail address to correspond directly with your instructor. All ISAT-224 students are required to access Desire-2-Learn (D2L) each week for assignment retrieval, guides, announcements, and other instructional support.
A flash drive of other media to save your work on (16GB or larger) - label your media with your name. A working SIU network ID and password to log into D2L Desire 2 Learn Site: https://online.siu.edu

Objectives: Upon successful completion of the course, the student should be able to:

1. The student will understand basic computer architecture and how an operating system manages the hardware.
2. The student will understand and use several popular desktop environments: Windows, Gnome, KDE.
3. The student will be able to use the appropriate shells (bash, command-line, or powershell) for basic console-driven file manipulations and monitoring tools.
4. The student will understand partitioning and utilize a variety of file systems including FAT, NTFS, EXT.
5. The student will understand how to change file ownership and permissions.
6. The student will understand the boot, runlevel, and shutdown mechanisms for both Linux and Windows.
7. The student will understand kernel processes and user processes and be able to monitor and optimize processes.
8. The student will be able to monitor memory allocation and identify/troubleshoot some types of memory malfunctions.
9. The student will understand how operating systems manage hardware, how Hardware Abstraction Layers work, and how to monitor and manipulate Input/Output.
10. The student will be introduced to some basic shell scripting (no looping operations), roughly analogous to simple DOS batch files.
11. The student will learn how to add, remove, or edit new users, and will be introduced to the client-server model.
12. The student will understand various network file systems.
13. The student will learn how to identify CPU performance and network latency problems and will apply some troubleshooting techniques to correct problems.
14. The student will become familiar with several of the most important journaling and logging features of both Windows and Linux.
15. The student will build a simple Linux server and optimize its performance.

Attendance Policy
Attendance to classes is mandatory. Absence from a class without prior permission from the instructor will result in a deduction of the student’s total grade points received to date for each infraction. If an absence is unavoidable due to health or an emergency related problem, the student is responsible for contacting the instructor at their earliest convenience to ensure arrangements can be made to submit class assignments and reschedule exams. The final exam cannot be rescheduled.

The only exceptions to this policy are if the student is required to attend a university-sanctioned event or observances of major religious holidays. Notification and/or paperwork must be provided at least three class periods in advance of these absences. The University Policy on Accommodating Religious Students can be found in the Undergraduate Catalog, page 494.

Class Participation: Meaningful participation in weekly class discussions are a part of you final grade. This course will be delivered in a discussion group format in which you views, comments and experience are valued.

Classroom Disruptive Behavior Policies
All ISAT classrooms do not allow Food or drink. Inappropriate use of laptops, cell phones, MP3 players, magazines, newspapers during class and any other inappropriate disruptive behaviors will not be tolerated. If disruptive behavior continues after a warning, the student will be told to leave.

General Grading Criteria
All assignments must be neat and professional. As a technical manager or supervisor, professional, clear, and concise written documents are paramount in effective communications. Spelling, grammar, punctuation, ability to analyze situations, and following directions will be stressed and graded accordingly.

Course Homework Assignments: All assignments have deadlines for submission. There will be a due date and time for each assignment. No Late assignments will be accepted.

Quizzes and Exams
There will be three exams covering chapter content to measure “the knowledge, comprehension, evaluation and synthesis of student’s learning” based on discussions and the deliverables/products from each class meeting. The Final Exam will be comprehensive and cover the all chapters of the course per the course outline provided below. Each of these exams will cover in-class discussions, supplemental presented materials, and course text readings. Exam review times will be provided at the instructors’ discretion. Quizzes will typically be unannounced when given. Come prepared to class having reviewed the material covered or reading assignments. Quizzes cannot be made-up.

Class Deliverables / Products and Grading Scale
Deliverables are weekly course assignments to be completed by each student. These deliverables include but are not limited to: selected end of chapter Questions, assignments, and instructor assigned materials. Collaborative work between students for homework assignments is allowed, but each student is responsible for submitting their own coursework. See the definition on Academic Dishonesty for further guidance below.

Deliverable / Product Submission Requirements
Course submissions of deliverables and product(s) will be submitted in either a MS Word or Excel format. Use of other word processing formats may distort and/or provide unreadable content. Assignment submissions will be preferably uploaded to D2L as an attachment by the required assignment due date and time. All assignment submissions will have your name on the assignment. Example: Lastname Firstname Assignment. Failure to do so will result in 0 points for the assignment. Each student will be responsible for making sure that the uploaded material is loaded in D2L. Specific document submission layouts and formats will be provided for each deliverable / product.

- When corresponding via email, you must include a subject line with the following format “ISAT 224-001, Your Name, Reason for Message”. E-mail Correspondence that does not follow this format will be filtered directly to my Junk/Spam folder.

- If you have any questions about the manner of submission for each assignment, ask on the day you receive it to avoid losing points for disorganized work.

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<thead>
<tr>
<th>Grading Scale</th>
<th>Deliverables / Products</th>
<th>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 90 -- 100%</td>
<td>Class Participation and Attendance</td>
<td>10%</td>
</tr>
<tr>
<td>B = 80 -- 89%</td>
<td>Labs/Class Assignments/Quizzes</td>
<td>50%</td>
</tr>
<tr>
<td>C = 70 -- 79%</td>
<td>3 Exams</td>
<td>25%</td>
</tr>
<tr>
<td>D = 60 -- 69%</td>
<td>Final Exam</td>
<td>15%</td>
</tr>
<tr>
<td>F = &lt; 60%</td>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

INC = Only in extreme circumstances. Refer to page 32 in the Undergraduate Catalog.

Final Exam – May 14th, 12:30-2:30pm, ASA 204B

Students are responsible for in class discussions and all information including new assignments, schedule changes and announcements made during class, attendance, and participation are extremely important.

Topical Outline

Topics:
I. Network Topologies and Networking
II. ISO Reference Model
III. IEEE 802 Protocols
IV. Networking Hardware
V. TCP/IP & Utilities
VI. Remote Access and Security
VII. Network Services
VIII. Network Protection
IX. Troubleshooting
X. Operating Systems

Note: Topics will be interspersed throughout each unit.
IMS Policy on Academic Dishonesty
Approved 3/30/01

The Student Conduct Code of SIU clearly spells out the University policy on Academic Dishonesty. Courses involving the use of the computer require extra consideration, because computer work is easily copied. This departmental policy is intended to provide additional guidelines for such cases. A copy of this policy will be included in the departmental student handbook and will also be available on the IMS website. Each faculty member will have a copy for his or her own use and for distribution to students.

Definition of Academic Dishonesty

We define academic dishonesty to mean turning in material created by someone else and representing it as your own work or permitting others to represent your work as their own.

The following guidelines may be used to help in determining whether or not academic dishonesty has occurred:

1. The student turns in work (i.e., computer work) that is identical to or extremely similar to work turned in by another student or students, unless identical work is the expected norm.
2. When confronted, the student cannot explain the details of his or her work and the methods used to arrive at the solution.

Some Examples:

Academic Dishonesty has occurred:

- When a student turns in work created by someone else and represents it as his or her own work.
- When a student permits someone else to turn in his or her work and represent it as his or her own work.
- When a student copies work from another student.
- When a student copies answers from another student on a quiz, exam, or test.
- When a student uses notes or materials of any kind during a quiz, exam, or test (unless it is announced by the instructor as “open notes” or “open book”).
- When a student deliberately changes parts of computer work in an attempt to disguise the origin.
- When two or more students collaborate on a project that is supposed to be completed individually.

Academic Dishonesty has not occurred:

- When students have the instructor’s permission to collaborate on a project.
- When students receive appropriate help from instructors, graduate assistants, or other staff members involved with the course.
- When students help each other with syntax errors or other application-specific information that makes computer work easier.
- When students participate in a general discussion about the assignment, such as discussing the requirements for the assignment or general strategies for completion of the assignment.

Penalty for Academic Dishonesty

First offense: from a zero on the specific lab/assignment/project/exam to course grade of F.

Second offense: from course grade of F to suspension from the department.

Third offense: permanent suspension from the department.

Records of academic dishonesty will be maintained in the student’s file in the departmental advisor’s office, as well as in a master academic dishonesty file in the department chair’s office. When an incidence of academic dishonesty occurs, the faculty member will meet with the department chair to discuss the situation and determine the appropriate penalty.
Emergency Procedures. Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

Resources for additional academic help – Writing Center, Learning Support Services, tutoring, DSS services, etc. Two examples:

Supplementary Assistance: With the cooperation of SIU’s Disability Support Services (DSS), each student who qualifies for reasonable supplementary assistance has the right to receive it. Students requesting supplementary assistance must first register with DSS in Woody Hall B-150, (453-5738) or http://disabilityservices.siu.edu/

Notice: If you have any type of special need(s) or disability for which you require accommodations to promote your learning in this class, please contact me as soon as possible. The Office of Disability Support Services (DDS) offers various support services and can help you with special accommodations. You may wish to contact DDS at 453-5738 or go to Room 150 at Woody Hall to verify your eligibility and options for accommodations related to your special need(s) or disability.

SIU email policy
Official SIU Student Email Policy: http://policies.siu.edu/policies/email.htm

Saluki Cares—The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. To make a referral to Saluki Cares click, call, or send: http://salukicares.siu.edu/index.html; (618) 453-5714, or siucares@siu.edu.
IMPORTANT DATES *

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Semester Class Begins</td>
<td>01/20/2015</td>
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<tr>
<td>Last day to add a class (without instructor permission)</td>
<td>01/20/2015</td>
</tr>
<tr>
<td>Last day to withdraw completely and receive a 100% refund</td>
<td>02/01/2015</td>
</tr>
<tr>
<td>Last day to drop a course using SalukiNet</td>
<td>04/05/2015</td>
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<tr>
<td>Last day to file diploma application (for name to appear in Commencement program)</td>
<td>03/13/2015</td>
</tr>
<tr>
<td>Final examinations</td>
<td>03/13/2015</td>
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Note: For outreach, internet, and short course drop/add dates, visit Registrar's Academic webpage [here](http://registrar.siu.edu/)

**SPRING SEMESTER HOLIDAYS**

- Martin Luther King, Jr.'s Birthday 01/19/2015
- Spring Vacation 03/07—03/15/2015

**WITHDRAWAL POLICY ~ Undergraduate only**

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit [Registrar's Academic webpage](http://registrar.siu.edu/)

**INCOMPLETE POLICY ~ Undergraduate only**

An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student's grade point average. For more information please visit: [here](http://registrar.siu.edu/grades/incomplete.html)

**REPEAT POLICY**

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A,B,C,D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at [here](http://registrar.siu.edu/pdf/ugradcatalog1314.pdf)

**GRADUATE POLICIES**

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit [here](http://gradschool.siu.edu/about-us/grad-catalog/index.html)

**DISABILITY POLICY**

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. [Here](http://disabilityservices.siu.edu/)

**PLAGIARISM CODE**

[Here](http://pvcaa.siu.edu/_common/documents/Plagiarism/Guide%20to%20Preventing%20Plagiarism.pdf)

**MORRIS LIBRARY HOURS**

[Here](http://www.lib.siu.edu/about)

**SAFETY AWARENESS FACTS AND EDUCATION**

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: [here](http://safe.siu.edu)

**SALUKI CARES**

The purpose of Saluki Care is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For Information on Saluki Care: (618) 453-5714, or [siucares@siu.edu](mailto:siucares@siu.edu)

**EMERGENCY PROCEDURES**

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Please reference the Building Emergency Response Protocols for Syllabus attachments on the following pages. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

**INCLUSIVE EXCELLENCE**

SIU contains people from all walks of life, from many different cultures and sub-cultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well as an essential preparation for any career. For more information please visit: [http://www.inclusiveexcellence.siu.edu/](http://www.inclusiveexcellence.siu.edu/)

**LEARNING AND SUPPORT SERVICES**

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website: [here](http://tutoring.siu.edu/)

**WRITING CENTER**

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit: [here](http://write.siu.edu/)

**AFFIRMATIVE ACTION & EQUAL OPPORTUNITY**

Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: [here](http://diversity.siu.edu/#)

**Additional Resources Available:**

**SALUKINET:** [https://salukinet.siu.edu/cp/home/displaylogin](https://salukinet.siu.edu/cp/home/displaylogin)

**ADVISEMENT:** [http://advisement.siu.edu/](http://advisement.siu.edu/)

**SIU ONLINE:** [http://online.siu.edu/](http://online.siu.edu/)

Spring 2015 R.O'Rourke