IST 207 Section 1: Programming Logic & Design
Information Systems Technologies/School of Information Systems and Applied Technologies
College of Applied Sciences and Arts /Southern Illinois University at Carbondale
Spring 2015

INSTRUCTOR: XiaoDong Jung

OFFICE: ASA 105, W & W 8:30 – 9:30 A.M. & T 8:30 A.M. – 11:00 A.M. Other times by e-mail appointment
PHONE: (618) 453 – 7227 (no voice mail, no answer means I am either in class or off campus)
E-MAIL: xdjing@siu.edu (The most effective way to contact me)
Website: http://www.xdjung.siuc.edu

CLASS MEETING: Monday & Wednesday, 11:00 A.M. – 12:15 P.M.

COURSE DESCRIPTION:
This course provides students with the foundation for computer programming covering topics such as problem analysis, flowcharting, pseudocode, and algorithm development. Concepts such as documentations, structured design and modularity are emphasized. The course also introduces topics in discrete mathematics such as number systems, sets and logic, relations and functions, truth tables, trees, and graphs.

PREREQUISITES TO: IST 209

STUDENT LEARNING OBJECTIVES: Upon successful completion of this course, the student will be able to:
1. Perform conversions and calculations with a variety of number systems
2. Apply formal methods of propositional and predicate logic.
3. Create a truth table to determine whether a given formula in predicate logic is valid.
4. Explain the basic terminology and perform of functions, relations, and sets.
5. Perform standard operations associated with functions, relations, and sets.
6. Illustrate, by example, the basic terminology of graph theory.
7. Demonstrate different traversal methods for trees and graphs.
8. Design structured problem solutions using tools such as flowcharts, pseudocode, and algorithms.
9. Demonstrate knowledge of input, output, variables, data types and validation.
10. Demonstrate knowledge of decision and repetition structures.
11. Demonstrate knowledge of programming functions and modularization.

TEXTBOOK REQUIRED:
WWW.perasonhighered.com
Do NOT install RAPTOR (a flowchart-based programming environment). It is user unfriendly. We will use Visio or any other good software, such as Draw if it’s necessary. It is not necessary to use the CD that comes with the book. It only contains RAPTOR installation and the answer to the “Checkpoint”. All the Checkpoint answers are posted on D2L.

Storage Media: The use of USB Flash Drive is highly recommended for backup of assignments. Students should not save files to the local computer as the CLC staff may re-image each workstation periodically, causing the loss of files stored there. Please backup your files often. You may need them for future assignments.

SIU Online (Desire2Learn or D2L System)
1. Supplementary information for the course is available at https://online.siu.edu. The Web site contains class notes, PowerPoint slides, class announcements, the course syllabus, online tests and other information for the course.
2. It is your responsibility to check IST207 - 1 on D2L for the updated information regularly.
3. Grades will be posted on D2L “My Grade” after each test is taken. The grade book will show exactly how you are progressing.
4. IST207 - 1 will be available to log in on January 20, 2015. If you are the first time user, SIU Online Helpdesk is available at: http://cte.siu.edu/d2lhelp/
5. Your user name and password for D2L long on are the same as your campus Network ID and password.

GRADING: Grading components consist of quizzes/attendances, homework assignments, discussions, exams and a final exam. Homework assignments include problem sets, programming tasks, and reading/reflection. Students are expected to have read assigned material prior to class.

Graded Activity
Attendance 10%
Homework 20%
Discussion 15%
Exam 55%
Total 100%

Grading Scale
100 – 90: A  89 – 80: B  79 – 70: C  69 – 60: D  59 and below F

A. Policy on Late Assignments: All homework assignments are submitted via D2L Dropbox. Once the Dropbox is closed, you are not able to submit. In other words, no late submission allowed. It will marked as 0.
B. Exams. Chapter and Comprehensive final exam will be conducted. No make-up examinations will be given.
C. “Incomplete’ Policy. An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. Refer to the SIU University Policy on
‘Incomplete’ as a course grade in the 20xx-20xx Undergraduate Catalog, p 32. Incompletes are the prerogative of the instructor, not the students.

ATTENDANCE POLICY:
A. Attendance is required, as it is essential for optimal learning experiences in this class. Attendance is taken in every class meeting.
B. Arrive to class on time. Arriving late to class disturbs the class in process. Repeated tardiness may adversely affect your final grade. Tardiness and early departure from class may be regarded as disruptive behavior, and will negatively impact the class participation points. It may also count as an unexcused absence. Course Participation: This is a measure
C. The only excused absences are documented illness, a death in your immediate family, an official religious holiday (see the University Policy on Accommodating Religious Students, 20xx-20xx Undergraduate Catalog, p. 494), or a documented emergency or natural disaster. Absences beyond these may adversely affect your final grade. If you miss a class, it is your responsibility to obtain material that was covered.
E. Be respectful toward your instructor and classmates. Unprofessional conduct may, at the instructor’s discretion, lead to a deduction of the student’s final grade.

CLASSROOM USE OF TECHNOLOGY POLICY:
A. Students may not use cell phones, PDAs, or similar communication devices during class or lab time. Such devices must be silenced or turned off and should not be taken out during meeting time.
B. Electronic communication such as instant messaging, text messaging, web surfing, social networking, etc. is strictly prohibited unless expressly designated as part of the learning activities.
C. Electronic audio or video recording of the classroom environment is prohibited unless permission is granted by the instructor prior to recording.
D. Laptops or other electronic devices may be used for note-taking or specific course activities with the instructor’s permission. Students must turn off the wireless function and close all applications/windows other than the appropriate application for note-taking or class activities.

UNIVERSITY POLICIES:
A. Academic Integrity. Students are expected to submit original work and adhere to the academic policies as stated in the SIU Student Conduct Code: policies.siu.edu/policies/conduct.html. Any act of academic dishonesty, cheating, or plagiarism in any form, including anonymous internet sources used in student papers, will be reported. These acts are taken seriously and the consequences may range from failing an assignment to expulsion from the university. Cheating: I strongly encourage the sharing of knowledge. I expect you to help your peers. However, a student may not use or copy (by any means) another’s work (or portions of it) and represent it as his/her own. This will be considered an Act of Academic Dishonesty. All students are expected to follow the SIU Student Conduct Code and the ISAT Policy on Academic Dishonesty (below). Please visit the Student Rights and Responsibilities at http://srr.siu.edu. In addition, see the Morris

**ISAT POLICY ON ACADEMIC DISHONESTY:**
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 school policy is intended to provide additional guidelines for such cases. A copy of this policy will be included in the school student handbook and will also be available on the ISAT 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 school.
- **Third offense:** permanent suspension from the school.

Records of academic dishonesty will be maintained in the student’s file in the school advisor’s office, as well as in a master academic dishonesty file in the school director’s office. When an incidence of
academic dishonesty occurs, the faculty member will meet with the school director to discuss the
situation and determine the appropriate penalty.

**B. SIU Email.** Your SIU email account is an official form of University
communication. Your instructor will use SIU email as a primary means of electronic
communication with our students. Please make sure that you maintain a valid
password and acquire the habit of regularly checking your SIU email account for
important instructor and University announcements. You may view the official SIU
Student Email Policy at: [policies.SIU.edu/policies/email.html](http://policies.SIU.edu/policies/email.html)

**C. Statement on 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 from you is an
important part of your
education in this class, as well as an essential preparation for any career.

**D. Emergency Procedures.** SIU 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 SIU 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 [bert.siu.edu](http://bert.siu.edu), the SIU Department of Public Safety’s website [dps.siu.edu](http://dps.siu.edu)
(disaster drop down and video, “Shots Fired”), and in the 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.

**E. Supplementary Assistance.** SIU is committed to assisting students with
disabilities. 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, 618-453-5738 or 618-453-2293 (TTY), by email
[DSS@siu.edu](mailto:DSS@siu.edu), or [disabilityservices.siu.edu](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 class, please contact me as soon as possible.

**STUDENT SERVICES:**

**A. Learning Support Services.** The Center for Learning Support Services (CLSS)
assists students of all cultures, abilities, backgrounds and identities with enhancing
their self-management and interdependent learning skills. Programs offered by
CLSS include; group study sessions; math tutoring; academic coaching; early
intervention program; and study skills seminars. For additional information please contact CLSS in Woody Hall, Room A-313, 618-453-2925, or tutoring.siu.edu.

B. **Writing Center.** The Writing Center offers free tutoring services and assistance with improving writing skills to all SIU undergraduate and graduate students and faculty. For center locations and hours, to schedule an appointment online, and to view information regarding the Online Writing Lab (OWL) contact the Writing Center at 618-453-1231 (Morris Library location); 618-453-2927 (Trueblood location), or write.siu.edu.

C. **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: salukicares.siu.edu; (618) 453-5714, or siucares@siu.edu.

The instructor reserves the right to make changes as may be required to the course syllabus. Students will be notified of syllabus changes.

**IST 207– Programming Logic and Design**

**Schedule of Class Activities**

ASA 112C M & W 11:00 – 12:15

Chapter covered: Ch1, 2, 3, 4, 5, 6, 7, 8, 14, and 15

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<tr>
<th>Week</th>
<th>Monday (Lecture/Lab)</th>
<th>Wednesday (Discussion/Lab)</th>
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| Week 1 1/19, 21 | ▪ Holiday (no class) | ▪ "A good beginning is half done"  
▪ Pass out syllabi, Student Info Sheet  
▪ Overview textbook  
▪ Pretest (required, preparation is not needed) |
| Week 2 1/26, 28 | ▪ Ch1: Intro to Computers and Programming  
▪ Ch1 Discussion questions and homework assigned  
▪ Lab | ▪ Ch1 Discussion  
▪ Lab |
| Week 3 2/2, 4 | ▪ Special Topic: Intro to Discrete Math  
▪ Lab  
▪ Ch1 Homework due by noon (via D2L Dropbox) today | ▪ Special Topic: Discussion  
▪ Lab |
| Week 4 2/9, 11 | ▪ Ch2: Input, Processing, and Output  
▪ Ch2 Discussion questions and homework assigned  
▪ Lab  
▪ Special Topic homework due by noon today | ▪ Ch2 Discussion  
▪ Lab |
| Week 5 2/16, 18 | ▪ Test 1 Review  
▪ Ch2 homework due by noon today | ▪ Test 1 (Ch1 and 2)  
▪ Current Grade Total posted by 2/23 |
| Week 6 2/23, 25 | ▪ Ch3: Modules  
▪ Ch3 Discussion questions and homework assigned  
▪ Lab | ▪ Ch3 Discussion  
▪ Lab |
| Week 7 3/2, 4 | ▪ Ch4: Decision Structure and Boolean Logic  
▪ Ch4 Discussion questions and homework assigned  
▪ Lab  
▪ Ch3 Homework due by noon today | ▪ Ch4 Discussion  
▪ Lab |
| Week 8 3/9, 11 | ▪ Spring Break | |
| Week 9 3/16, 18 | ▪ Test 2 Review  
▪ Lab  
▪ Ch4 Homework due by noon today | ▪ Test 2 (Ch3 and 4)  
▪ Current Grade Total posted by 3/23 |
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<th>Week 10</th>
<th>3/23, 25</th>
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<tbody>
<tr>
<td>▪ Ch5: Repetition Structures</td>
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<td>▪ Ch5 Discussion questions and homework assigned</td>
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<td>▪ Lab</td>
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<tr>
<td>▪ Ch5 Discussion</td>
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<td>▪ Lab</td>
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<th>Week 11</th>
<th>3/30, 4/1</th>
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<tr>
<td>▪ Ch6: Functions</td>
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<td>▪ Ch6 Discussion question and homework assigned</td>
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<td>▪ Lab</td>
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<td>▪ Ch5 Homework due by noon today</td>
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<td>▪ Ch6 Discussion</td>
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<td>▪ Lab</td>
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<th>Week 12</th>
<th>4/6, 8</th>
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<tbody>
<tr>
<td>▪ Ch7: Input Validation</td>
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<td>▪ Ch7 Discussion question and homework assigned</td>
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<td>▪ Lab</td>
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<tr>
<td>▪ Ch6 Homework due by noon today</td>
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<td>▪ Ch7 Discussion</td>
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<td>▪ Lab</td>
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<th>Week 13</th>
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<tr>
<td>▪ Test 3 Review</td>
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<td>▪ Lab</td>
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<tr>
<td>▪ Ch7 Homework due by noon today</td>
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<td>▪ Test 3 (Ch5, 6 and 7)</td>
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<td>▪ Current Grade Total posted by 3/17</td>
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<th>Week 14</th>
<th>4/20, 22</th>
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<tr>
<td>▪ Ch8: Arrays</td>
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<td>▪ Ch8 Discussion questions and homework assigned</td>
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<td>▪ Lab</td>
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<tr>
<td>▪ Ch8 Discussion</td>
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<td>▪ Lab</td>
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<th>Week 15</th>
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<tr>
<td>▪ Ch14: Object-Oriented Programming</td>
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<tr>
<td>▪ Ch14 &amp; 15 Discussion Questions assigned (no homework for Ch14 &amp; 15)</td>
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<td>▪ Ch8 homework due by noon today</td>
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<td>▪ Lab</td>
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<td>▪ Ch15: GUI Applications and Even-Driven Programming</td>
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<tr>
<td>▪ Ch15 Discussion</td>
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<td>▪ Final Exam Review</td>
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<td>▪ Class Evaluation</td>
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<tr>
<th>Week 17</th>
<th>5/11 - 15 SIU Finals</th>
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<tr>
<td>▪ Final Exam (comprehensive)</td>
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<td>▪ Friday (12/15), 10:15 A.M.- 12:15 P.M.</td>
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