LSP 121 - Quantitative Reasoning and Technological Literacy II

Winter 2017-2018

M W 11:20 am – 12:10 pm

Section 214

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Classroom – Student Center room 363 – Lincoln Park Campus

Lab Assistant –

Office Hours: **Student Center room 332**
No appointments are required for office hours.

Monday 10:30 am → 11:20 am
and
Wednesday 10:30 am → 11:20 am

Last date to drop this class (or any Winter 2017-2018 class) with tuition refund:
January 15

Last date to withdraw from this class (or any Winter 2017-2018 class):
February 19

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a major change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and communicated via email.

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Course Description

This course provides more advanced mathematical and computational methods in the analysis and interpretation of quantitative information. Topics include databases, descriptive statistics, measures of association and their interpretation, elementary probability theory, and an introduction to algorithms and computer programming. The course is taught in a hands-on laboratory environment where students are introduced to advanced computer tools for data analysis, including databases and a professional statistical software package.

Objectives of this Course

This Quantitative Reasoning and Technological Literacy course is designed to help you to become a more confident, critical, and capable user of quantitative information of all kinds. In particular, it will help you to

- continue to critique quantitative arguments, whether given numerically, graphically, or in written form
- become acquainted with data analysis software as used to prepare and analyze basic descriptive statistics
- apply probability concepts appropriately
- manipulate data via the creation and use of relational databases
- understand the basic concepts of algorithm creation and computer programming

Prerequisites

- Passing grade in LSP 120 or successful completion of the LSP 120 Proficiency Exam

If you feel that you already know the material presented in this course….

There is a placement exam you can take to exempt yourself from this class. You must take this exam within the first week of classes to waive the course this quarter. If you pass this exam, you will be waived from taking this course. Consult the Quantitative Reasoning Center website http://qrc.depaul.edu for more details.

Course Organization

The course material will be presented in three segments – Statistics/Probability, Databases, and Algorithms/Computer Programming.

Tentative Class Topic Schedule - Subject to Change

Sessions 1 - 8	Jan 3,8,10,17,22,24,29,31	Basics and Statistics/Probability
Session 9	Feb 5	Statistics/Probability Exam
Sessions 10 - 15	Feb 7,12,14,19,21,26	Databases
Session 16	Feb 28	Databases Exam
Session 17 - 20	Mar 5,7,12,14	Algorithms/Computer Programming
Session 21	Mar 19	Algorithms/Computer Programming Exam

Textbook

There is no required textbook for this class.

Required Materials

Students will need the following electronic resources:

- A place to store your work (Flash drive, "cloud" account). If you bring a flash drive to class, please make sure that it is labeled with your name and email address, inside and outside.

- Access to the software we will be using at the desktop in the classroom.
  - MS-Office, including
    - MS-Access
    - MS-Word
    - MS-Excel
  - pdf reader software (e.g. Adobe Reader)

- The software products listed above are available at DePaul Computer Labs.
- MS-Office is available for use on a DePaul student's personal computer, free of charge, to DePaul students who activate an Office 365 Education Plus account
- SPSS is available for use on a DePaul student's personal computer, free of charge, via the DePaul Virtual Lab http://vlab.depaul.edu

Grading Policy

Grades will be based on the numbers of points you earn during the quarter. Approximately 1000 points will be available from a variety of sources. You must take all three exams in order to pass this class.

Grading Scale - Based on the total of Points

Grades Mapped to Points Earned:

- A 93% and above
- A- 92.9%-90.0%
-
- B+ 89.9%-87.0%
- B 86.9%-83.0%
- B- 82.9%-80.0%
-
- C+ 79.9%-77.0%
- C 76.9%-73.0%
- C- 72.9%-70.0%
-
- D+ 69.9%-67.0%
- D 66.9%-60.0%
-
- F 59.9% and below

Sources of Points (approximate)

- 20% Exam 1
- 20% Exam 2
- 20% Exam 3
- 20% Individual Homework Assignments
- 20% Team Assignments

An expanded description of each Source of Points:

Exams

There will be three exams. The first two will be given during class time. The third will be given during the final exam time scheduled for this class by DePaul University, specifically ***Monday March 19 from 11:30 am to 1:45 pm.*** This third exam being lengthier may include some extra credit based on previous topics covered in the course. You must complete the third exam during the time specified above.

Each of the three exams will cover a different class segment – Statistics/Probability, Databases, and Algorithms/Computer Programming.

There are no makeup exams in this course. If you cannot take an exam due to illness or family emergency, you must inform me before the exam by email.

Students must complete all three exams.

Individual Assignments

During many weeks there will be an assignment to be completed by each student outside of class. The purpose of these assignments is to give individual outside-of-class practice on the skills we are learning and to explore some ideas more thoughtfully and deeply. These assignments also provide the opportunity to complete work similar to exam problems. The assignments will be available on D2L in the Dropbox section.

Assignment due dates are stated on D2L as part of the information about the Dropbox. Any student who submits an assignment after the due date will be assessed a penalty.

Late submissions of individual assignments will lose 20% of the points for that assignment per day (or any portion of a day).

Individual assignments must be done individually. Students who submit work not completed by themselves alone will be subject to plagiarism penalties. Any student who submits an Individual Assignment by another student or prepared jointly with another student will be subject to cheating/plagiarism penalties.

I will use the *TurnItIn* software available via DePaul University, to review written work as part of the evaluation process. This software detects evidence of plagiarism of submitted work.

Team Assignments

Team assignments will be part of the work completed by all students.

Each team assignment submission must include the names of the team members who contributed to the assignment.

All team members who contribute to the submitted team assignment, as reported on the contributor list submitted as part of the assignment, will receive the same number of points for that team assignment.

It is up to the team to agree upon how to complete team assignments…and it is each person's responsibility to complete work as agreed upon by the team.

It may be tempting to divide the work of the team assignment so that each team member completes only a portion of the assignment and the resulting portions are assembled for submission. That is not a good strategy. Each team member should complete the entire team assignment. There are several options for working together on team assignments. Team members may wish to work jointly on a single submission during class "team time". They may also decide that each person will complete the entire assignment independently and collaborate/review each other's work to determine the answers that should be submitted for evaluation.

No late team assignments will be accepted.

Class Attendance and Contribution
Class attendance is important. You must be in class to complete your team assignment. Team assignments will not be accepted if completed outside of the classroom.

During each class session a sign-in sheet will be in class. It is your responsibility to make sure that you personally sign the attendance sign-in sheet each day you attend class.

Students will be expected to prepare for class by completing assigned readings and reviewing class materials, such as lecture slides.

Desire To Learn (D2L)

The Desire To Learn website **http://d2l.depaul.edu** is a secure site for course management. It contains all class materials. You must use your CampusConnect ID to login to D2L.

Quantitative Reasoning Center

The Quantitative Reasoning Center (QRC) provides invaluable support to LSP121 students. Check for location and hours of QRC LSP121 tutors at the QRC website http://qrc.depaul.edu

Your Email Address

Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Students should be sure the email address listed under "demographic information" at http://campusconnect.depaul.edu is correct and is one they check frequently. .

Email to your Instructor

When sending e-mail to me, please include your name, the topic/question, and the class ID (LSP121) in the subject of the email.

My goal for e-mail response to student questions sent via e-mail is 24 hours. In many cases, a response will be sent much more quickly.

File Formats for Assignment Submission

It is each student's responsibility to make sure that work they have submitted to D2L can be accessed/ read by the instructor.

Document Files

Submitted document files must be compatible with MS-Word 2013.
If you use a different word processing software product, such as Pages for Mac, you will need to save your submission file as an MS-Word file and submit that MS-Word file to D2L.

Other Files

Other file formats (Excel, Access) will be required for some assignment submissions. The required file format will be specified in the instructions for each assignment.

It is to your advantage…

to pay attention in class. Please avoid distractions.

Class presentations and demonstrations for hands-on work are fast-paced. If you use personal electronic devices during class presentations, you may miss important concepts and process steps.

Turn off cell phones and other devices during lectures and in-class demonstrations,

You may use electronic devices such as personal computers and tablets during class, if that use is for LSP121 class purposes. For example, taking class notes would be permitted.

Use classroom computers for LSP121-related activities only.

Do not access social networking sites, play games, text, work on other classes, check email, surf the Web, etc. during class presentations and demonstrations.

Respect all class members. Limit your classroom entries and exits while a lecture is in progress.

Do not carry on non-class conversations during class presentations and demonstrations.

Learning Outcomes for LSP 121 (QRTL)

1. Statistics: Students will be able to make and interpret frequency distributions; summarize data with measures of central tendency and dispersion; measure and interpret the association between variables; recognize the difference between correlation and causation; solve applied problems involving the normal distribution and z-scores.

2. Professional Statistical Package: Students will be able to import data from a spreadsheet or database into a statistics package; use graphical tools in a statistical package to make specialized statistics plots such as box plots and normal probability plots; calculate descriptive summary statistics using a statistical package.

3. Probability and Chance: Students will be able to recognize that seemingly improbably coincidences are not uncommon; evaluate risk from available evidence; and calculate basic, common probabilities.

4. Database tools: Students will be able to enter data into a pre-existing database; import data from a text file or spreadsheet file into a database; filter records based on a single parameter and on multiple parameters; sort records with multiple sort keys; formulate and conduct queries; generate a report from a database; recognize the difference between a flat file and a relational database; create a relational database using two or more tables; construct a query for a relational database using joins; design and implement forms for data entry.

5. Algorithms and reasoning: Students will be able to use sequential, logical thinking; develop algorithms to solve problems; use Boolean conditionals and repetition structures to create simple computer programs.

6. Programming tools: Students will be able to construct the concept of algorithm through experimentation and reflection on everyday activities; articulate an accurate definition of an algorithm; recognize algorithms fitting the definition; construct the notion of a control structure and a repetition structure; acquire the ability to trace simple program listings using control and repetition structures; use control and repetition structures to write simple computer programs to complete a task.

College Policies

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at cdm.depaul.edu/enrollment

Academic Integrity and Plagiarism

This course will be subject to the university's Academic Integrity Policy. More information can be found at http://academicintegrity.depaul.edu/. If you have any questions be sure to consult your instructor.

Incomplete

Grades of Incomplete are given only in cases of medical emergency or other highly unusual emergency situations. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final, and approved by the Dean of the College of Computing and Digital Media. Please note that University guidelines require that you must be earning a passing grade at the time you request an incomplete grade. You should have completed most of the course, with at most one or two major forms of evaluation missing. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request. Incompletes revert to an F if they are not resolved within one quarter.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you contact the Center for Students with Disabilities (CSD) at csd@depaul.edu

CSD Campus Locations:

Lincoln Park Campus
Student Center, LPC, Suite #370
Phone number: (773)325.1677
Fax: (773)325.3720
TTY: (773)325.7296

Loop Campus
Lewis Center 1420, 25 East Jackson Blvd.
Phone number: (312)362-8002
Fax: (312)362-6544
TTY: (773)325.7296

Course and Instructor Evaluation

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.