LSP 121: Quantitative Reasoning and Technological Literacy II (Hybrid)

Instructor

- Term: **Spring 2017**
- Meeting Day and Time: **Wednesday from 4:20p.m-5:50p.m**
- Classroom: **Levan 306**
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- Office Hours: **6p.m-7:30p.m CST in STDC 332, also online anytime based on availability using Online Rooms in D2L**

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.

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

Official 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.

Format of this Course

Hybrid Course Format

This course will be offered in a hybrid format (50% online and 50% in-class). This means that we will have only one in-class session/week on-campus. - **1.5 contact hours/week** instead of 3 hours for a 4 credit hour course**.**

Below is a breakdown of what you can expect to follow before, during and after the Module.

Before Module (online)	During Module (in-class)	After Module (online)
Overview clip: Student will view a clip to learn about the Module. **Reading:** Student will review all resources in the Module **Reading Quiz:** Student will complete a reading quiz.	**Mandatory Attendance:** Instructor will take in-class attendance. **Activities**: Student complete in-class activities.	**Assignment:** Student complete assigned assignments upload it to D2L Dropbox before the <u>due date</u>. Please note: <u>No late submission is accepted</u>. **Reading:** Before the next in-class session, student reviews the reading resources and complete reading quiz for the next Module.

Students must complete work as assigned by the due dates specified. **This is not a self-paced course**. **No late assignments will be accepted**.

To be successful in the hybrid format you will need to invest at an average of 8-12 hours/ week outside the classroom.

Why 8-12 hours/week outside the classroom?

Hybrid format is not for everyone. The combination of both online and in-class learning required in a hybrid course demands **more time**, **dedication**, and **time-management** skills than traditional face-to-face classroom learning. Therefore if your answer is "Yes" to ALL the following questions, then you will enjoy learning in this format:

- Do you express yourself well in writing and have good reading skills?
- Are you comfortable working with computers and using the Internet?
- Are you good at managing and scheduling your time?
- Are you willing to take responsibility for your learning as well as work collaboratively with your classmates and instructor?

Are Hybrid Courses for Me?

For more details, please go to http://www4.uwm.edu/ltc/hybrid/student_resources/for_me.cfm

Objectives of 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:

- Critique quantitative arguments, whether given numerically, graphically or in written form
- Manipulate data via the creation and use of relational databases
- Become acquainted with basic descriptive statistics and probability

Understand the basic concepts of algorithm creation and programming

Learning Outcomes

1. **Statistics**: Students will be able to make and interpret frequency distributions; summarize data with measures of center and dispersion; measure and interpret the association between variables; recognize correlation; solve applied problems involving the normal distribution.
2. **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.
3. **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.
4. **Algorithm and 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 effect a task.

How These Learning Outcomes Will be Met

1. **Statistics:** Activity 2 is devoted entirely to basic descriptive statistics; introduces normal distributions. Homework assignments 2 reinforce these concepts.
2. **Probability:** Activity 3 covers an introduction to probability with a short section on risk. Homework Assignment 3 reinforces these concepts.
3. **Database tools:** Activities 4-6 introduce Access databases, table/query/form/report creation, and normalization. Homework assignments 4-6 reinforce these concepts.

4. **Algorithms and reasoning:** Activities 7-8 introduce the concepts of sequential statements, if statements, loop statements, and function call statements and require the students to use these to solve a variety of problems.
5. **Programming tools:** Activities 7-8 introduce the concepts of sequential statements if statements, loop statements, and function call statements and require the students to use these to solve a variety of problems.

Writing Expectations:

Nice computer activities each of which has a final product in the form of a Word document with five to ten short paragraph responses.

How These Writing Expectations Will Be Met:

All homework assignments and all activities require the students to answer many questions using short paragraph answers.

Prerequisites: LSP 120

LSP 121 is a Liberal Studies requirement for freshman and transfer students that entered DePaul University on or after the autumn quarter 2006. When taking LSP 121, you may "reduce by one the number of courses they must take to meet your Learning Domain Area requirements. This course reduction can come from any one of the six Learning Domains, as long as the student still takes at least one course from each Domain and as long as the student still completes the laboratory and quantitative requirements in the Scientific Inquiry area."

If you feel you already know the materials presented in this course, there is a placement exam you may take. **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 qrc.depaul.edu website (click on Links in the left navigation bar, click on LSP 121 Placement Exam Study Guide in the list) for additional details.

Required Resources and Materials

Access to: D2L at DePaul; MS-Access 2013; and MS-Excel 2013 (both part of MS-Office 2013). **You will need to use a Windows PC for this course.** Large portions of the course cannot be completed on a Mac or Linux computer. All three of these requirements can be met by using DePaul University labs.

We will use Desire2Learn (D2L) as our Course Management System. All assignments and course materials will be provided through D2L; Assignments will be submitted on D2L, and Quizzes will be taken online in D2L. So you need Internet access. If you are going to be traveling during part of the course, you will need Internet access from your travel location as you will have assignments to complete.

If you are new to D2L, please review the resources in http://offices.depaul.edu/information-services/services/technology-training/topics/Pages/d2l.aspx.

Reading and Viewing Material

All necessary reading materials will be provided to you. There is no text to purchase.

Grading Breakdown:

Grade Item		Points	Total Item	Total
Attendance and Participation				
	Session 1	**2**		
	Session 2	**2**		
	Session 3	**2**		
	Session 4	**2**		
	Session 5	**2**		
	Session 6	**2**		
	Session 7	**2**		
	Session 8	**2**		
	Session 9	**2**		
	Session 10	**2**	**20**	
Quiz				
	M1: Is Hybrid Format for me?	**2**		
	M1: Your commitment to this course	**1**		
	M2: Statistics	**1**		
	M3: Probability	**1**		
	M4: Database	**1**		
	M5: Database	**1**		
	M6: Database	**1**	**8**	
Assignments				
	M2: Assignment	**6**		
	M3: Assignment	**6**		
	M4: Assignment	**6**		
	M5: Assignment	**6**		
	M6: Assignment	**6**	**30**	
Final Exams				
	Statistics and Probability Final Exam	**28**		

	Database and Algorithm Final Exam	14	42	**100**
Bonus Activity				
	Activity 1 (Bonus)	1		
	Activity 2 (Bonus)	1		
	Activity 3 (Bonus)	1		
	Activity 4 (Bonus)	1		
	Activity 5 (Bonus)	1		
	Activity 6 (Bonus)	1	6	
Bonus Assignment				
	Reflection Essay (Bonus)	1	1	**107**

Grading Scale:

This grading scale is approximate. I reserve the right to round the edges up or down to make sure two students with almost the same numerical grade do not receive different letter grades.

93 - 100	A
90 - 92.9	A-
87 - 89.9	B+
83 - 86.9	B
80 - 82.9	B-
77 - 79.9	C+
73 - 76.9	C
70 - 72.9	C-
67 - 69.9	D+
60 - 66.9	D
0 - 59.9	F

Tutoring

DePaul provides tutoring for LSP 121. The tutoring schedule is located at http://qrc.depaul.edu/ > LSP 121 > LSP 121 TUTORING.

Pacing:

- **Before the in-class session:**
    a. Review the assignment readings – clips, documents (activities optional) prior the following in-class session
- **During the in-class session:**
    a. Attend the in-class session, ask questions and complete in-class activities
- **After the in-class session:**

a. If required, contact instructor via email, cell or during virtual office hour AND/OR tutor (schedule at http://qrc.depaul.edu/ > LSP 121 > LSP 121 TUTORING) to ask questions.

b. Complete the assignment and upload it to D2L Dropbox before the due date.

Students must complete work as assigned by the due dates specified. **This is not a self-paced course**. **No late assignments will be accepted**.

Submitted Materials:

Students should keep a copy of all materials submitted to the D2L Dropbox until the end of the course. Occasionally we experience the disappearance of submitted materials. If your material disappears, you need to be able to provide it again.

Tentative Schedule

Module 1:	Overview of the course, self-assessment, student introductions, and LSP 120 concepts review.
Module 2:	Overview of Computer-based Data Analysis Simulation, Measures of Central Tendency, and Normal Distribution. Descriptive Statistics and Correlation for data analysis
Module 3:	Probability
Final	Statistics and Probability Final Exam
Module 4:	Overview of Data Management. Data Analysis with Relational Databases using simple database queries
Module 5:	Working with Multiple Database Tables, and Complex Queries
Module 6:	Database Forms and Reports
Module 7-8:	Introduction to Visual Computing and Algorithms, Programming Properties and Behaviors, and Programming User Interactions
Final	Database and Algorithm Final Exam

Course Withdrawal

Students who withdraw from the course do so by using the Campus Connection system (http://campusconnect.depaul.edu. Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

Excused Absence

In order to petition for an excused absence, students who miss class due to illness or significant personal circumstances should complete the Absence Notification process through the Dean of Students office. The form can be accessed at http://studentaffairs.depaul.edu/dos/forms.html. Students must submit

supporting documentation alongside the form. The professor reserves the sole right whether to offer an excused absence and/or academic accommodations for an excused absence.

Incomplete and FX Grades:

Grades of Incomplete are given only in cases of medical emergency or other highly unusual emergency situations. Please note that University guidelines require that students must be earning a passing grade at the time one requests an incomplete grade. Students should have completed most of the course, with at most one or two major forms of evaluation missing. Incompletes revert to an F if they are not resolved within one quarter.

DePaul CDM policy is that all incompletes must be requested by the student using an online form. See CDM grading policies at http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If that occurs, reasons for the change and options available to students will be thoroughly addressed on the course D2L site. Changes are not made lightly as this syllabus is considered a contract between instructor and student.

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 have contacted the Center for Students with Disabilities (CSD) at:

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

Academic Integrity:

University policies on academic integrity will be strictly adhered to. Violations of academic integrity, including (but not limited to): cheating; plagiarism; fabrication of data; and complicity, are not tolerated. It is expected and understood students are familiar with DePaul's Academic Integrity Policy. The Policy can be found at: http://academicintegrity.depaul.edu/AcademicIntegrityPolicy.pdf. It defines the violation terms used above and provides a complete statement about the rules.

Consult the Academic Integrity website for further guidance: http://academicintegrity.depaul.edu/

The university and CDM policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Online Course Evaluations

Towards the end of the course you will receive a notification to complete an online evaluation to share your feedback and assess the quality of the instructor and this course. Please consider completing this evaluation to provide your feedback!

Your commitment to this course

You will be asked to confirm that you understand and commit to following the following to be successfully in this course:

- *Hybrid format*: This course will be offered in a hybrid format (50% online and 50% in-class). 1.5 contact hours instead of 3 contact hours for the 4 credit hours.
- *More time, dedication, and time-management*: The combination of both online and in-class learning required in a hybrid course demands more time, dedication, and time-management skills than traditional face-to-face classroom learning.
- *A typical week for a student:* I understand what is expected of me before, during and after each in-class session.
- *8-12 hours outside classroom:* I will invest at an average of 8-12 hours/week outside the classroom.
- *Mandatory in-class attendance*: In-class attendance is mandatory and if I miss any session it will impact my grade and could potentially drop my grade by ½ letter.
- *Missed class*: If I miss an in-class session(s) then it is my responsibility to make sure that I review the resources and complete the assignment before the due date.
- *Assignments submitted by due dates*: Assignments submitted after the due date will not be accepted by the instructor as the answers to the assignments will be provided shortly after the deadline so students who submitted on time can see the correct answers. Therefore, I will complete all the assignments prior the due date.
- *Contact instructor about assignments*: If I have questions about the assignment, I will contact the instructor at least **48 hours** prior the submission due date. And I understand that if I contact the instructor on the assignment due date, he might not be able to reply back.
- *Use PC to complete this course*: I will use PC instead to complete this course, as Mac does not offer all the required software features.
- *Online Rooms in D2L:* I know how to use Online Rooms and realize that this is where my instructor will conduct virtual office hours.

- *Tutor*: I know the tutor schedule - http://qrc.depaul.edu/ > LSP 121 > LSP 121 TUTORING
- *LSP 121 Placement Exam:* I know that if I want to take a place test I can find out the information from http://qrc.depaul.edu/ > LSP 121 > LSP 121 Placement Exam.
- *Syllabus:* I have read the syllabus and understand what is expected of me.

Acknowledgement

I have used content and structure of this course created by Dr. Daniel Mittleman, Dr. Terry Steinbach, and Dr. Curt White, who have also taught LSP 121 on-campus and/or online.