

LSP 121

Quantitative Reasoning and Technological Literacy II

Summer 2018 Online

Instructor: Miles Jackson

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Office hours: Thursday 3:00PM – 4:30PM

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 online where students are introduced to advanced computer tools for data analysis, including databases and a professional statistical software package

Textbook: none

Prerequisites: LSP 120

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 for more details.

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 continue 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 use Visual Studio in a Windows environment.

Course Navigation

The main course navigation is divided into the following sections:

Course Home – This area includes the News section where key announcements and weekly outline will be posted throughout the quarter.

Content – This is where you'll find the syllabus, readings, module videos, and other resources.

Discussions – This is where most of our online interactions will occur during the course. This course is designed to encourage active participation and learning. You are expected to demonstrate your understanding of class materials by using developmental concepts, theories and research to explain or justify your comments and relate to your own experience. You are also encouraged to ask questions and to answer other students' comments in a respectful, responsible, and constructive manner. The online collaborative discussions are especially valuable because they allow everyone to benefit from voices and points of view that might not get expressed in a traditional face-to-face discussion.

Quizzes – *Practice* quizzes will be located here.

Dropbox – This is where you will submit your Activity and Homework each week.

Grades – This area displays grades and feedback you've received on any activity, homework, discussion and tests.

Classlist – Here you'll find a list of all of the participants in the course. You can click a *participant's* name to send him or her an email.

Course Pacing

This course is divided into five weeks. While the coursework will not require you to be online at a particular time, you will need to meet deadlines to keep pace with your classmates as the quarter progresses. All work in a week must be completed by the due date.

Notes: Students with disabilities or students who need accommodations for online learning should contact the Center for Student with Disabilities. The CSD office has two full-service office locations:

Lincoln Park Campus, Student Center 370, 773/325-1677 Loop Campus, Lewis Center 1420, 312/362-8002

Macintosh users please read: Students in the course are strongly encouraged to use a PC rather than a Macintosh as Activities will be demonstrated using MS-Office 2016 software on a PC running Windows 7 or Windows 10. Students who try to complete these Activities on a Macintosh will find the work they must do does not match what was demonstrated in class. While MS-Office is available for the Mac, that version does not contain MS-Access, the database program taught in this course. Substitute database programs (NeoOffice, LibreOffice, OpenOffice) look and feel very different from Access; and do not interchange files cleanly-- though they purport to do so.

This issue is also present when statistics and probability are taught using MS-Excel, however the Mac view in Excel 2008 and Excel 2011 is much closer.

Required Software:**Preferred - DePaul Virtual Lab**

Students should visit <http://software.depaul.edu>

Both PC and Mac student users:

- Will be able to use [https:// labdrive.depaul.edu](https://labdrive.depaul.edu) to work with files on their own personal S: drive
- In this way you can move files into an area where you can use MS-Access (Mac)
- You will also be able to move files from the S: drive to work with other software (e.g. SPSS, MS-Excel, MS –Access and Visual Basic)

Microsoft Access 2016. You can download a 30 day free copy here

<http://office.microsoft.com/en-us/access/> This software is also available in all DePaul CDM Labs <http://www.cdm.depaul.edu/current%20students/pages/labs.aspx>

Microsoft Excel 2016. You can download a 30 day free copy here

<http://office.microsoft.com/en-us/excel/> This software is also available in all DePaul CDM Labs <http://www.cdm.depaul.edu/current%20students/pages/labs.aspx>

Microsoft Visual Studio 2017. You can download a free copy for windows

here <https://e5.onthehub.com/WebStore/ProductsByMajorVersionList.aspx?ws=0c08c3d0-f86f-e011-971f-0030487d8897&vsro=8>

This software is also available in all DePaul CDM Labs

<http://www.cdm.depaul.edu/current%20students/pages/labs.aspx>

Tutoring is not available during the summer.

Grading

Students will be evaluated on the basis of:

1. 200 Points Activities and Homework
2. 100 Points Discussions
3. 200 Points Quizzes

1. Activities and Homework – Each week there will be activities and homework to be done. Their purpose is to give you individual practice on the skills we are learning and to explore some ideas more thoughtfully and deeply. The videos will demonstrate the activity. The activities should be done individually. The homework is separate from the activity. The activities are due by the date posted in D2L. Most activities are due on Sunday, 11:59 pm. The first activity and homework will be due 6/17, 11:59 pm and the last activity will be due 7/15, 11:59 pm. **Activities and Homework more than 1 week late will not be accepted 200 points.**

2. Discussions - weekly participation on 5 discussion topics will count for 100 points. You are asked at a minimum to make two posts each week on or before **Friday** at 11:59pm. Students are expected to compose a thoughtful response to (1) of their classmates' posts by Friday (of the same week) by 11:59pm (about 1 paragraph in length) to receive 17 points. The initial post should address the guided question provided in the module (This is done through referencing the text and providing insight). The 2nd post is due by **Sunday**, 11:59pm to earn the remaining 3 points.

3. Quizzes and dates

Quiz 1: 6/21-6/25 65 points

Quiz 2: 7/5-7/9 65 points

Quiz 3: 7/11-7/15 70 points

Two options:

Option 1 - Examity

This service will give you flexibility to schedule quizzes at your convenience and take them wherever you want as long as you adhere to the exam rules set for the test. You have to create a profile in Examity during the first week of the term. To preview how the application works, view this link <https://youtu.be/GPDUiC2ekLE>

Other notables

- You must take the exam on a desktop computer or laptop (not a tablet).
- Please note that large monitors are not allowed as they are not equipped to pan the room.
- You must have a working built-in or external webcam and microphone.
- Your Internet speed must be at least 3Mbps download and 3Mbps upload. Determiner your Internet speed by running a test at: <http://www.speedtest.net>
- The proctored quizzes cannot be taken in a public space such as a library
- Internet searches are not allowed during the quizzes
- Interacting with someone during the exam is not allowed.

Option 2 – Live Proctor

Local Students

Students located in Cook County are considered local and are expected to come to a DePaul campus to take any quizzes required by the course:

There is no proctoring fee for quizzes and exams taken at the Loop location (243 S. Wabash, 60604).

Loop:

Monday, Tuesday, and Wednesday: 10:00am, 2:00pm & 6:00pm

Thursday: 2:00pm & 6:00pm

Friday & Saturday: 10am & 2:00pm

Remote Students

You have to locate an acceptable proctor or someone who meets the requirement below:

Acceptable Proctors

- A librarian at an academic or public library
- Testing centers at 2 or 4 year colleges and universities
- Faculty member at a local university or community college.

- Commercial learning/tutoring centers (i.e. Sylvan Learning Center). Students are responsible for proctor fees.
- A military learning center or officer of higher rank, if in the military

Unacceptable Proctors

- Relatives
- Friends
- Neighbors
- Co-workers or supervisors
- Staff members or clergy at a place of worship

See Google Maps, [National College Testing Association](#) list of participating institutions and [Sylvan Learning Centers](#).

Grading Percentage

Point Scale:			
460 – 500	A	360 - 389	C
450 – 459	A-	350 – 359	C-
440 - 449	B+	340 - 349	D+
410 - 439	B	300 - 339	D
400 - 409	B-	295 - 299	D-
390- 399	C+	0 - 294	F

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 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. Incompletes revert to an F if they are not resolved within one quarter. If such a situation should occur, please inform the instructor as soon as possible. A grade of FX is assigned if the student quits coming to class but never officially drops the course.

Academic Integrity

Violations of academic integrity, particularly plagiarism, are not tolerated. Plagiarism is defined by the university as:

“..a major form of academic dishonesty involving the presentation of the work of another as one's own. Plagiarism includes but is not limited to the following:

- *The direct copying of any source, such as written and verbal material, computer files, audio disks, video programs or musical scores, whether published or unpublished, in*

- whole or part, without proper acknowledgement that it is someone else's.*
- *Copying of any source in whole or part with only minor changes in wording or syntax, even with acknowledgement.*
 - *Submitting as one's own work a report, examination paper, computer file, lab report or other Activity that has been prepared by someone else. This includes research papers purchased from any other person or agency.*
 - *The paraphrasing of another's work or ideas without proper acknowledgement. Plagiarism, like other forms of academic dishonesty, is always a serious matter. If an instructor finds that a student has plagiarized, the appropriate penalty is at the instructor's discretion.*
- Actions taken by the instructor do not preclude the college or the university from taking further punitive action including dismissal from the university” (DePaul Student Handbook).*
- University policies on academic integrity will be strictly adhered to. Consult the DePaul University Student website for further details.

Tentative Weekly Schedule *This schedule can change without notice*

Week 1: Statistics and SPSS
Assignment, Homework and 2nd
Discussion post due 6/17
Discussion post 1, week 1 due 6/15

Week 2: Probability and Introduction
to Databases
Assignment, Homework and 2nd
Discussion post due 6/24
Discussion post 1, week 2 due 6/22
Quiz 1 6/21-6/25

Week 3: Database Queries and
Reports
Assignment, Homework and 2nd
Discussion post due 7/1
Discussion post 1, week 3 due 6/29

Week 4: Database Switchboards, Algorithms
and Flowcharts
Assignment, Homework and 2nd
Discussion post due 7/9
Discussion post 1, week 4 due 7/6
Quiz 2 7/5-7/9

Week 5: Programming
Assignment, Homework and 2nd
Discussion post due 7/15
Discussion post 1, week 5 due 7/13
Quiz 3 7/11-7/15

Learning Outcomes for LSP 121 (QRTL):

- **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 the difference between correlation and causation; solve applied problems involving the normal distribution and z-scores.
- **Probability:** Students will be able to recognize that seemingly improbable coincidences are not uncommon; evaluate risk from available evidence; and calculate basic, common probabilities.
- **Algorithms and reasoning:** Students will be able to use sequential, logical thinking; develop algorithms to solve problems; use Activity Statements to create simple computer programs.
- **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 and create a switchboard.
- **Professional Statistical Package:** Students will be using tools in Microsoft Excel to make specialized statistics plots, calculate descriptive summary statistics.
- **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 acquire the ability to trace simple program listings using flowcharts.
- **Writing:** Each week students will create and respond to a discussion post.