

LSP 121 Quantitative Reasoning and Technological Literacy II

Syllabus

Winter Quarter 2020-2021

Section 530/531

The course content, assignments, schedule, and evaluation for these sections of LSP 121 (Section 530/531 Winter Quarter 2020-2021) will be different from those for other sections of LSP 121 during Winter Quarter 2020-2021, and from those of prior quarters.

LSP 121 course sections typically cover statistics/probability, databases, and algorithms/computer programming.

The course content, assignments, schedule, and evaluation for LSP 121 - Section 530/531 Winter Quarter 2020-2021 will be a pilot for a new course to be offered beginning with the 2021-2022 Academic Year.

LSP 121 - Section 530/531, Winter Quarter 2020-2021, will center on computational reasoning, a problem-solving process that includes problem decomposition, pattern recognition, abstraction, and algorithmic thinking. The course will include a high-level introduction to the Internet, the World Wide Web, and Web application development. It will also include an introduction to a second technological environment (Python). In addition, students will develop the ability to explain the potential harms and benefits of computing in a number of contexts.

When you have successfully completed LSP 121 - Section 530/531, Winter Quarter 2020-2021, you will receive credit for LSP 121.

Instructor Information

Instructor: M J Davidson, PhD

Instructor E-Mail Address: m.j.davidson@depaul.edu

Office Hours:

Tu – 5:00 – 6:00 PM CT

Wed – 5:00 – 6:00 PM CT

Th – 5:00 – 6:00 PM CT

or by arrangement (request via email)

All Office Hours will be conducted on Zoom (Zoom link for regular office hours will be posted on D2L course website)

Important Dates

Consult the DePaul Academic Calendar to find:

- Last date to “swap” sections of this class
- Last date to drop this class (or any class) with tuition refund
- Last date to withdraw from this class (or any class)

<https://academics.depaul.edu/calendar/Pages/default.aspx>

Course Description

LSP 121 - Section 530/531, Winter Quarter 2020-2021

LSP 121 - Section 530/531, Winter Quarter 2020-2021 will introduce computational reasoning, a problem-solving process that includes problem decomposition, pattern recognition, abstraction, and algorithmic thinking. Students will learn to formulate a problem statement, plan and implement a solution.

The course will include a high-level introduction to the Internet, the World Wide Web, and Web application development. Students will create interactive web pages by writing HTML and CSS and by programming in JavaScript. Topics will include the origins and evolution of computers and of the Internet/World Wide Web, the roles and operations of web browsers and web servers, design principles for web sites, creating content for distribution on the Web, and development of interactive Web applications.

LSP 121 - Section 530/531, Winter Quarter 2020-2021 will also include an introduction to computational tools in a second technological environment (Python). Students will learn the basics of that technological environment and will demonstrate the ability to create original artifacts in that environment.

Students will demonstrate an enhanced knowledge of computational reasoning by comparing and contrasting the work they have done in both technological environments.

Students will demonstrate the ability to discuss the potential harms and benefits of computing in a number of contexts.

LSP 121 – Section 530/531

Learning Outcomes and Writing Expectations and How They Will Be Met

As a part of successful completion of LSP 121 Section 530/531, students will achieve the following Learning Outcomes:

1. *Apply computational thinking skills to analyze and design solutions to problems or to express a creative concept.*

Students will complete a series of projects of increasing complexity that rely on computational reasoning skills (Modules 2,4-10). Students will complete a final project that demonstrates their improved ability to apply computational reasoning.

2. Develop, express, trace, and analyze algorithms.

Students will apply computational thinking techniques, including algorithm creation, to solve a problem humans might encounter (Module 2). Students will develop algorithms that are intended to guide program implementation (Modules 7-10)

3. Apply fundamental concepts of programming in implementing algorithms.

Students will complete programs based on algorithms (Modules 7-10)

4. Create original artifacts using computational tools and techniques.

Students will complete projects that result in original artifacts(i.e. Web pages, Python programs) created using computational tools and techniques (Modules 4-10.) Students will complete a final project that results in an original artifact created using computational tool and techniques.

5. Apply computational tools to transform and manipulate data.

Students will complete projects that require application of computational tools(i.e. Web pages, Python programs) to transform and manipulate data (Modules 4-10)

6. Explain the potential harms and benefits of computing in a number of contexts.

Students will complete discussion postings that answer forum questions about assigned readings in the required textbook, Blown To Bits, and related articles. Blown To Bits focuses on the benefits and harms of computing.

Students will achieve the following Writing Expectations.

LSP 121 Section 530/531 will require both formal writing (e.g. critical analyses, reaction papers to readings, essays answering questions posed by the instructor, or technical reports) and supplemental written elements that are appropriate for the subject of the course, such as problem-sets, computer code, charts, and diagrams.

1. Students will demonstrate skills in writing at an appropriate level of detail (including the ability to summarize effectively), choosing an effective format, paraphrasing and citation of sources as required, technical accuracy, and quality of expression, including grammar, spelling and word usage.

Students will complete discussion postings that answer forum questions about assigned readings in the required textbook, Blown To Bits, and related articles.

2. Students will be required to write the equivalent of a minimum of five to ten pages, distributed across a series of assignments. Specific types of writing required will be a part of the description of assignments appropriate to the topics covered.

In addition to discussion postings, students will complete a final project that will require that they describe their progress in computational reasoning and relating it to an artifact they have created.

Prerequisites

LSP 120 or equivalent

Course Modality: Online Asynchronous Learning

This course is an asynchronous online learning course, meaning we won't all be online at the same time. All online learning courses are generally independent in nature, but this is particularly true of asynchronous courses. There are no set meeting times and you are primarily responsible for your own learning. My job as an instructor is to provide you with the tools and vehicles for your learning. I cannot replicate a classroom experience online and I cannot coax you to do the necessary work for the course. ***You must be motivated to complete this course and do the work independently.***

Online courses also require you to schedule your learning time without the structure of attending a class at specific days and times- you will need to manage your time to be successful in the course! ***Please realize this online course is designed to be the equivalent of an on campus course that has 30 classroom hours and also includes all of the outside preparation and learning time that should go on with such a course (which are many additional hours).*** As such, the amount of time you will need to put into this class is extensive and ***I would recommend strongly that you pace yourself over each week and not leave everything until the very end of a module.*** Students who pace themselves tend to do very well. Students who do not, tend to do quite poorly. There is a relationship between time management and performance in this course! D2L is available to you 24 hours a day 7 days a week- so when you do your work is certainly up to you! Do also be vigilant for maintenance and outages that affect D2L access.

This course has a series of weekly modules that include combinations of readings, lecture and power point, video viewing, web-based resources, and discussion boards. Many modules will require that you complete a project using computer software products. Some modules include quizzes to test your understanding of the module topics. There will be assigned readings in our required textbook, Blown To Bits and other related articles. You will need to post to discussion forums pertaining to those readings. You will need to complete a final project that summarizes your work during the quarter.

Each module begins with a brief descriptive overview and a checklist that is a step-by-step guide of everything you need to do to complete the module and when those things are due. The checklist has several links embedded so you can access online resources directly. You can complete this classwork in a way that suits your schedule within the time frame of each module.

In order to keep everyone on track, we will have due dates throughout the quarter much as you would have regular course meetings and due dates in a face-to-face course. In D2L, content is organized into modules. These modules are sequential. Each module has a checklist with items ***that should be completed during the time frame of the module.*** Each module begins and ends at midnight on a Sunday. All assignments for a module are due by 11:59 PM CT of the ending Sunday for the module. (See the course schedule included in this syllabus for more details.)

Work Required - Assignments

You will complete:

- a series of projects that result in Computational Artifacts (e.g. Web pages, Python programs, algorithms). You will submit these artifacts for evaluation.
- project journals. These journals will be brief reflections on how you have used computational reasoning in the course of completing assigned projects and outside LSP 121 Sec 530/531.
- quizzes that demonstrate your knowledge of course topics.

- assigned readings in the required textbook, Blown to Bits. You will also read related articles as assigned.
- postings to course discussion forums to reflect your understanding of assigned readings on benefits and harms of computing.
- a final project that will summarize your work throughout the quarter.

You must complete all of these assignments by yourself alone. If you have questions about assignments, you should consult your instructor or the CDM tutor. While you may discuss these assignments with others, you may not use the work of others nor share your own work with others. You may not communicate with other individuals during quizzes. When you submit assignments to your instructor for evaluation (whether submitted via D2L or posted to the student web server) you are guaranteeing that you have completed the products yourself, individually. Any evidence of collaboration or sharing of work or other violations of the rules stated above will be treated as an Academic Integrity violation.

Evaluation

55% Projects, including, projects that result in computational artifacts, computational reasoning/project journals, final project

25% Quizzes

20% Discussion Forum postings - commentary on assigned readings on the potential harms and benefits of computing in a number of contexts.

Due Dates and Late Work

All Project and Quiz assignments for a module will be due before 11:59 PM on the last day (Sunday) of the Module/Week. For example, the project and quiz for Module/Week 1 will be due before 11:59 PM (CT) of Sunday, January 10, 2021. All due dates will be posted on D2L and are stated on the assignment schedule included in this syllabus.

Discussion threads (first post to forum) must be made before 11:59 PM on the last day (Sunday) of the Module/Week. For example, the discussion thread for Module/Week 1 will be due before 11:59 PM (CT) of Sunday, January 10, 2021. A thread must be posted to a forum before a response can be posted to a thread. A calendar of Discussion posting due dates is included in this syllabus and will be posted to D2L.

Discussion responses (in response to a thread) may be made at any time during the quarter, but must be made before 11:59 PM Sunday March 14.

More detailed information on how Discussion postings will be evaluated and scored (rubrics), is included in this syllabus and will be posted to D2L.

The final project for the course must be submitted during Winter Quarter 2020-2021 Finals Week, before 11:59 PM (CT) on Sunday, March 21, 2021. No final projects will be accepted after that date/time.

Late Work

Late project submissions will be assessed a 20% penalty per day (or portion of a day) late (after the due date/time). No project will be accepted more than five days after the due date/time.

No late quizzes will be accepted.

No late discussion postings will be accepted.

No late final projects will be accepted.

Grade Scale

Grading Scale - Based on 1000 Possible Points

Grades Mapped to Points Earned:

- A 930 and above
- A- 929-900
-
- B+ 899-870
- B 869-830
- B- 829-800
-
- C+ 799-770
- C 769-730
- C- 729-700
-
- D+ 699-670
- D 669-600
-
- F 599 and below

Technology Requirements

Windows PC or Apple Mac

Students will need to have access to a personal computer that can communicate with the Internet/World Wide Web.

Students will need to use a personal computer (Windows or Mac) for this class.

Software

Software recommendations will be listed on the D2L course website

Text Editor - Students will need text editor software.

File Transfer Program - Students will also need to have a program to upload and download files to and from the World Wide Web.

Image Manipulation – Students will need software that can reduce the file size of images and perform basic image editing tasks.

Web Browser(s) – Students should have at least two browsers available to test their work. Students should have at least Google Chrome and Mozilla Firefox browsers on their computer. Mac users will have the Safari browser, in addition to Chrome and Firefox.

Python desktop software – available for Windows PCs and Macs.

Required Textbook

Abelson, H., Ledeen, K., & Lewis, H. R. (2008). *Blown to bits: Your life, liberty, and happiness after the digital explosion*. Upper Saddle River, NJ: Addison-Wesley.

Assigned readings (in pdf format) are posted to D2L in each module.

The full text of the book (third printing, corrected) is available for download under a Creative Commons license



Blown to Bits: Your Life, Liberty, and Happiness After the Digital Explosion is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 3.0 United States License](https://creativecommons.org/licenses/by-nc-sa/3.0/).

Download available at <http://www.bitsbook.com>

You **do not** need to purchase a copy of this book

Recommended References

The following recommended references will be available as ebook reserves at the DePaul Library.

Links to the reserves will be posted on the D2L course website.

How Computers Work, The Evolution of Technology, Ron White

HTML and CSS: Visual Quickstart Guide , Joe Casabona

Python Crash Course , Eric Matthes

Javascript Absolute Beginner's Guide, Kirupa Chinnathambi

Computational Thinking for the Modern Problem Solver, Riley and Hunt

Course Management – D2L

We will use a wide variety of materials from many sources.

All course materials will be available via links on the course pages on D2L <https://d2l.depaul.edu>

All assignments must be submitted via D2L (Submissions, Discussions, Quizzes) or posted to the course Web server. The assignment description will specify how the assignment must be submitted.

All grades will be posted to D2L.

E-Mail

Email is the primary means of communication between faculty and students enrolled in this course

All enrolled DePaul students have been issued a BlueM@il email address (**username@depaul.edu**) that provided expanded access to software like Office 365 and Zoom.

All DePaul-based communications will be sent to your BlueM@il email address. These communications include any emails from a DePaul office or college, or messages sent from classroom technology such as D2L.

Make sure to regularly log into and check your student email through any of the various Microsoft Outlook apps and/or URLs listed below.

DePaul students can get the Outlook App for personal computers or mobile devices. Ways to check email (use your DePaul login credentials):

- **Outlook web app:** Go to office365.depaul.edu and select the Outlook icon
- **Outlook desktop app:** Go to office365.depaul.edu, log in with your DePaul BlueKey account credentials and [download Office 365 including Outlook](#). Instructions for configuring Outlook for use with BlueM@il can be found [here](#)
- **Outlook mobile app:** Download the Outlook mobile app on [iPhone](#) or [Android](#) Instructions for configuring Outlook for use with BlueM@il can be found [here](#)

E-Mail to your Instructor

When sending e-mail to me, please include your name, the topic/question, and the class ID (LSP 121) 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. If you send e-mail off-hours (6 pm → 9 am M-F or Saturday or Sunday) you will receive a response during the next weekday.

Tutoring

Tutoring for this course will be provided by the College of Computing and Digital Media (CDM) . Students can schedule tutoring at

<https://www.cdm.depaul.edu/Student-Resources/Pages/Student-Tutoring.aspx>

Shaden Nabil Saleh Handal will be the tutor for sections 530 and 531 during Winter Quarter 2020-2021. Students should make appointments with Shaden via the CDM website listed above.

Technical Support Resources

The DePaul Help Desk is up and running for all student, faculty, and staff issues during the Winter quarter. They can be reached by email at helpdesk@depaul.edu, by phone at 312-362-8765, and online at helpdesk.depaul.edu

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at <https://offices.depaul.edu/academic-affairs/faculty-resources/academic-integrity/Pages/resources.aspx>

All students are expected to abide by the University's Academic Integrity Policy which prohibits cheating and other misconduct in student coursework. Publicly sharing or posting online any prior or current materials from this course (including exam questions or answers), is considered to be providing unauthorized assistance prohibited by the policy. Both students who share/post and students who access or use such materials are considered to be cheating under the Policy and will be subject to sanctions for violations of Academic Integrity.

Responsible Use of University Resources

As a part of this class, students will post materials to a DePaul University-owned Web server. All students must use these University resources in a way that will represent the University community in a responsible way, representative of the University mission and goals.

The University's statement of Acceptable Use Policy/Network Security governs use of University Computer Resources. It describes acceptable and unacceptable uses of University Computer Resources. If you have any concerns that your actions may violate the policy or have a question about acceptable use, send your inquiry to security@depaul.edu.

The Acceptable Use policy can be found at <https://offices.depaul.edu/secretary/policies-procedures/policies/Documents/Acceptable%20Use%20Policy.pdf>

Diversity, Equity, and Inclusion

DePaul/CDM recognizes the rich diversity of our campus community and seeks to offer all members an equitable, inclusive, welcoming, secure, responsive, and affirming environment that fosters mutual respect, empathy and trust.

Preferred Name & Gender Pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun. Please

advise me of this preference early in the quarter so that I may make appropriate changes to my records. Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at <http://policies.depaul.edu/policy/policy.aspx?pid=332>

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:

<http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>

Incomplete Grades

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at

<http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

Online 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 with Disabilities

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling them to access accommodations and support services to assist with their success.

There are two office locations:

Loop Campus - Lewis Center #1420 - (312) 362-8002

Lincoln Park Campus - Student Center #370 - (773) 325-1677

Students can also email the office at csd@depaul.edu

Virtual office www.tinyurl.com/CSDVirtualOffices

Students who register with the Center for Students with Disabilities are also invited to contact Dr. Gregory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the accommodations to be used in a course. This is best done early in the term. The conversation will remain confidential to the extent possible.

Please see <http://go.depaul.edu/csd> for Services and Contact Information.

Changes to this Syllabus

This syllabus is subject to change as necessary during the quarter. If a syllabus change occurs, an announcement will be posted as a News item on D2L and you will be notified via email to your **BlueM@il email address**.

LSP 121 - Sec 530/531 Schedule - Topics and Assignments								
Module	Topic	Case study Project	Artifact Due	Written Submission	Quiz	Discussion	Reading	Due Date
1	Start-up			Survey	Start-up	Intro	B-B Ch 1	January 10, 2021
2	Computational Reasoning (CR)	Apply CR to a problem	CR Problem Solving Case Study	Project Journal	Computational Reasoning Basics	Computational Thinking	Computational Thinking (Wing)	January 17, 2021
3	How Computers, the Internet, and the WWW Work				How Computers, the Internet, and the WWW Work	Digital Explosion and Internet	B-B Appdx	Jan 24,2021
4	Intro to WWW - HTML	Create basic web pages	Web pages HTML	Project Journal		Privacy	B-B Ch 2	Jan 31,2021
5	Posting to WWW	Debug components and post to WWW	Web pages posted to CDM server	Project Journal	Intro to HTML, Posting to the WWW	Digital Presentation	B-B Ch 3	February 7, 2021
6	Beyond HTML -CSS	Add CSS to HTML	Web pages w CSS	Project Journal	CSS	Searches	B-B Ch 4	February 14, 2021
7	Beyond HTML - Javascript	Add Javascript to HTML and CSS	Web pages w CSS and Javascript	Project Journal	Javascript	Encryption, Cyber-Security	B-B Ch 5	February 21, 2021
8	WWW Summary	Use HTML, CSS and Javascript	Web pages w CSS and Javascript	Project Journal		Ownership, Intellectual Property	B-B Ch 6	February 28, 2021
9	Python	Python - Basics	Hello World in Python	Project Journal		Censorship	B-B Ch 7	March 7, 2021
10	Uses of Python	Python Beyond Basics	Python project	Project Journal	Python	Regulation + Wrap-Up	B-B Ch 8 + Conclusion	March 14,2021
Finals Week		Final Project						March 21,2021

LSP 121 - Sec 530/531 - Discussion and Readings Schedule				
Mod ule	Discussion Topic	Reading	Pages to Read or Skim B-B = Blown to Bits	First Post (Thread) Due before 11:59 PM CT on
1	Intro	B-B Ch1	B-B Read 1-17	1/10/2021
2	Computational Thinking	Computational Thinking (Wing)	Read 33-35	1/17/2021
3	Digital Explosion and Internet	B-B Appdx	B-B Read 301-316	1/24/2021
4	Privacy	B-B Ch 2	B-B Read 19-42; Skim 43-72	1/31/2021
5	Digital Presentation	B-B Ch 3	B-B Read 73-94; Skim 95-108	2/7/2021
6	Searches	B-B Ch 4	B-B Read 109-138; Skim 139-160	2/14/2021
7	Encryption, Cyber-Security	B-B Ch 5	B-B Read 161-180; Skim 181-194	2/21/2021
8	Ownership, Intellectual Property	B-B Ch 6	B-B Read 195-208; Skim 209-228	2/28/2021
9	Censorship	B-B Ch 7	B-B Read 229-258	3/7/2021
10	Regulation and Wrap-Up	B-B Ch 8	B-B Read 259-274, 295-300; Skim 275-294	3/14/2021
	All Discussion Responses Due Before 11:59 PM CT on			3/14/2021

LSP 121 – Sec 530/531 - Discussion Postings

Discussion threads (first postings to a forum/topic) and responses will be evaluated and scored as noted below.

Discussion threads (first postings to forum/topic) must be made before 11:59 PM on the last day (Sunday) of the Module/Week. For example, the discussion thread for Module/Week 1 will be due before 11:59 PM (CT) of Sunday, January 10, 2021. Discussion threads are required for each module. No late threads will be accepted.

A thread must be posted to a forum/topic before a response can be posted to a thread.

Discussion responses (responses to a thread) may be made at any time during the quarter, but all responses must be posted before 11:59 PM Sunday March 14.

Discussion responses to threads/first postings will earn extra credit (maximum of 5 points per response).

Students may post any number of discussion responses, but a student can earn a maximum of 50 extra credit points for discussion responses. Only 50 points can be earned for discussion responses.

How Discussion Postings will be Evaluated (Rubric)

Points	Quantity	Quality / Content/ Notes
Thread (First Posting to Forum/Topic) - Required		
0/20	no thread posted prior to due date/time;	
up to 10/20	one thread	Basic comment relevant to the discussion topic
up to 15/20	one thread	Basic comment relevant to the discussion topic . Answers all questions posed in the forum/topic
up to 20/20	one thread	Basic comment relevant to the discussion topic . Answers all questions posed in the forum/topic Meets length requirement
Response to Thread - Extra Credit		
0/5	no response to posting prior to 11:59 PM CT March 14, 2021	
up to 3/5	one response	Basic comment relevant to the discussion topic responding to fellow student's post, not just agreeing or disagreeing, and why
up to 5/5	one response	Basic comment relevant to the discussion topic responding to fellow student's post with additional, supporting information about why you agree or disagree