Course Syllabus

ILS 103 – Intro to Data Lifecycle Mgmt.

Department of Libraries & School of Information Studies

Course Information

Title: ILS 10300 - Introduction to Data Lifecycle Management
Modality/Format: Asynchronous Online Format (16-week session)
Homepage: ILS 103 - Fall 2024
Credit hours: 1
Prerequisites: No

Instructors

Instructor: Dr. Wei Zakharov
Virtual Office Hours: Thursday, 2 - 3 p.m. or by email. For more information, refer to the "Virtual Office Hours" module within Brightspace.
Purdue Email Address: wzakharov@purdue.edu

Instructor: Dr. Chao Cai
Virtual Office Hours: Refer to the "Virtual Office Hours" module within Brightspace.
Purdue Email Address: caic@purdue.edu

Teaching Assistant

Teaching Assistant: Vishal Purohit
Purdue Email Address: purohitv@purdue.edu

Learning Resources & Texts

Textbook: No textbook is required. Reading materials will be provided with Brightspace.

Virtual Office Hours

Would you like to chat with the instructor about course content or assignment expectations? You may access the virtual meeting room during the designated times by using the Zoom links found within the "Virtual Office Hours" Brightspace module.

Communications

Emails are read 8 a.m. to 5 p.m. daily and will be responded to within 48 hours (about 2 days) during weekdays. In email communications with the instructors or teaching assistants, please indicate the course name and number in the subject line or body of the email. We encourage you to take your time composing your message.

- If an email has been unanswered after 48 hours (about 2 days), please send a reminder.
- If you cannot find a time that works for you, please notify us via email indicating your availability and the subject of your visit.

Course Description

This course provides a foundation in the concepts of data organization, management, preservation, and publication. Students will engage the data management topics through readings, videos, discussion, lectures, guest speakers, and hands-on activities. They will develop an ability to locate, access, transform, and evaluate data to answer research questions. Students will communicate the results of their data searches and format the data for sharing.

Please Note: *Course content subject to change at discretion of instructor.*

Instructional Modality

All instruction and learning will occur in an asynchronous online modality with no meetings at established times. Required course materials will be available in Brightspace. This might include self-guided materials, pre-recorded lectures or videos, assignments, and assessments to be completed by specific deadlines. All assignments will be submitted digitally via Brightspace, as will grades and feedback.

Note: The Course Outline/Schedule is located at the end of the course syllabus.

Technology & Tool Requirements

Since this is an online course, it is expected that all learners will approach this course with basic computer and internet proficiency. Clear instructions have been developed for all the tools that are required, and additional help will be available as needed. For assistance with Brightspace, you can reach out to Purdue IT for help; for external tools that are used (i.e., Zoom), please consult with those tool websites directly.

Word Processor (i.e., MS Word), remember that MS Office is free for all students.

Webcam

Students are expected to have access to a webcam. For any support on learning remotely, please visit Purdue's Innovative Learning site.

Tutoring Support

Visit Ask a Librarian to connect with helpful resources and services provided by the Purdue Libraries and School of Information Studies for course assignments and projects.

Additional resources can be found in the Student Services widget located on the course homepage in the Student Help and Success Topic in the Table of Contents.

Brightspace Learning Management System (LMS)

Brightspace is where your course information is housed and where you will submit coursework. It is likely that you have taken courses that have made use of Brightspace before. However, if it is new to you or if you have any questions about the course management platform, please open a helpdesk ticket by emailing tlt@purdue.edu. Students may reach out to Purdue's Purdue IT Service Desk for additional assistance with Zoom or any other technology support. For any support on learning remotely, please visit Purdue's Innovative Learning site.

Access the course via Purdue's Brightspace learning management system. Begin with the "Introduction" module in the Table of Contents on the Course Homepage. It is strongly suggested that you explore and become familiar not only with the site navigation but with content and resources available for this course. See the Student Services widget on the campus homepage for resources such as Technology Help, Academic Help, Campus Resources, and Protect Purdue."

Zoom

Zoom, a web conferencing tool, will be used for instructor office hours and to allow students to interact with one another in real time. Zoom creates an online meeting room and has the capability to record meetings. Visit Purdue's Zoom webpage or the "Course Technology Tools" module for support resources.

How to Succeed in this Course

Students are expected to do all the required readings and assignments by the assigned dates. **We encourage you to be proactive in communicating with me or other university resources if you experience any difficulties that may inhibit your performance in this course.** Email is the preferred mode of communication.

Course Learning Outcomes

At the end of this course, students will be able to:

1. Describe a data life cycle and identify different types of data.
2. Identify a variety of data collection techniques and determine the appropriate way to collect data for their questions.
3. Locate existing data sets for their questions.
4. Organize data on local storage and in Purdue University Research Repository (PURR).
5. Apply best practices into data presentation and communication.
6. Use tools to preserve and publish data.

Assessments

Your learning will be assessed through a combination of assignment, self-assessments, quizzes, discussions, and a final project. Details on these assignments including a schedule of due dates will be posted in Brightspace.

Feedback

Assignment grades and feedback will be provided in the course grade book. You can expect to see the grade for your assignment within 14 days (about 2 weeks) of the due date for assignments submitted on time.

Readings

Readings will be assigned sporadically during the course, not always weekly. Ensure you review them promptly, as you're accountable for grasping their content. Additionally, there's a 'Recommended Readings' folder; while these deepen understanding, they're optional.

If you're unclear about a reading section, post your question in Brightspace's "Readings Q&A", providing context like page numbers or quotes. Engage with responses from peers and the instructor. These assignments aim to familiarize you with content and promote collaborative learning.

Quizzes and Self-Assessments

In the first two weeks of the course, students will engage in both quizzes and a unique self-assessment video reflection activity. The syllabus quiz, designed to familiarize students with the course content, is graded. Meanwhile, the self-assessment video reflection, based on a video that participants watch, is graded solely on completion.

Assignments

Detailed instructions for each assignment can be found in the assignment folders within their corresponding weekly modules.

Discussion Activities

During select weeks, there will be graded discussions related to the week's content. Here's how to approach them:

1. First, finish the weekly tasks.
2. Respond to 1-3 question prompts, ensuring your answers reflect your understanding of the week's materials and assignments.
3. Once posted, your responses are visible to classmates. While optional, engaging in discussions by commenting or asking questions is beneficial. Always be respectful and constructive.

These discussions help you reflect, share insights, and learn from peers. They also impact your course grade, so invest time and effort accordingly.

Final Project Guidelines

Your final project offers an opportunity to delve deeply into a topic related to data in everyday life. As a team of 3-4 members, you will pass through three critical stages to complete this project.

- Stage 1: Topic selection and team formation

- Stage 2: Topic approval from the instructor
- Stage 3: Presentation creation, recording, and submission

By the end of the semester, you'll have a recorded presentation to submit on Brightspace.

Project deliverables include the following six sections:

1. **Project Overview**: A brief synopsis of your team project that includes your objectives and an explanation of why you chose your specific topic.
2. **Data Source Explanation**: An explanation of your data source and a justification of your selection. Discuss how this dataset contributes to your project objectives.
3. **Data Quality Evaluation**: An evaluation of your data's quality, touching on reliability, validity, and any potential limitations.
4. **Data Management Plan Analysis**: A draft data management plan that describes how you would manage data storage, organization, and security in real-world execution.
5. **Data Visualization(s)**: At least one data visualization that effectively illustrates your data findings. Acceptable formats include graphs, charts, or other visualization methods appropriate for your data.
6. **Project Summary and Reflection**: A closing summary of your learning from the project, a reflection on the process and its outcome, and any changes you'd make if repeating the project.

Stage 1 - Team Formation and Topic Selection

Optional Activity

By 11:59 pm on Thursday, October 3, Week 7, you have the option to pitch a project idea in the discussion forum. If you're still refining your idea, use this time to browse others' topics and express your interest in joining their team by replying in the forum.

Mandatory Activity

By 11:59 pm on Thursday, October 17, Week 9, whether or not you pitched a topic, browse all topics and express interest in forming a team by replying in the forum. The first two to three students who express interest will form a team.

Incentive: Earn 2 bonus points if your pitched topic becomes the chosen final project.

Stage 2 - Topic Approval

This stage allows for feedback from instructors without grading. By Thursday, October 31 st, submit the first three components of the final project:

1. **Project Overview**
2. **Explanation of your data source**
3. **Evaluation of your data quality**

Note: Refer to the Data Quality Checking guide provided in Week 5 for the third component.

The end goal is an engaging team presentation that effectively communicates your project findings. Best of luck!

Gradebook

Grade Item	Points
5 Discussions (5 points each)	25
2 Quizzes (5 points each)	10
Metadata Assignment	15
Data Ethics Assignment	15
Final Project	35
Total Points	*100*

Course Outline/Schedule

Week #	Topics	Activities/Assignments
1	Data Life Cycle	• Icebreaker discussion • Syllabus Quiz
2	Primary and Secondary Data Collection	• How I Hacked Online Dating – Self-Assessment Quiz
3	Data Exploration	• Data Exploration discussion
4	Data Quality Evaluation	• Data Quality Evaluation discussion
5	Data Storage & Backup	• Data Storage & Backup discussion
6	File Naming/Organization	• N/A
7	Metadata	• Pitch Idea for Final Project • Meta Data assignment
8	*October Break*	• N/A
9	FAIR Principles	• **Final Presentation: Stage 1** – Join Team
10	Data Visualizations	• Data Visualization discussion
11	Geospatial Data Organization	• Guest speaker recording • **Final Presentation: Stage 2** - Draft
12	Sensitive Data / Data Management Planning	• N/A
13	Ethics	• Data Ethics assignment
14	Data Preservation and Publication	• N/A
15	*Thanksgiving Break*	• N/A
16	Quiet Week	• **Final Project: Stage 3 - Presentation**
17	Finals Week	• Final Project: Peer Review (Optional, bonus points)

Grading Scale

In this class, grades reflect the sum of your achievements throughout the semester.

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
%	100-93	92.9-90	89.9-87	86.9-83	82.9-80	79.9-77	76.9-73	72.9-70	69.9-67	66.9-63	62.9-60	≤ 59.9

Assignment Policies

Time Management and Late Assignments

Please complete your work in a timely manner and stay on top of deadlines so any last-minute 'surprises' are mitigated. We strongly advise students to contact us before the deadline if they anticipate any issues with an assignment. Any extension requests must be received at least 48 hours before the deadline and are subject to the instructor's discretion.

Assignments can be submitted up to one week after their due date. However, please note that late submissions will automatically incur a 10% deduction from the total possible points before grading.

Grade Appeals

Such appeals will be accepted no sooner than 24 hours and no later than 5 days after students receive their graded assignments. Appeals can be made to the professor. Each appeal must include a written explanation of the reason for the appeal and responses to written comments on the original assignment. We reserve the right to adjust your grade in either direction, up or down, in response to your appeal.

Etiquette

Students are asked to behave in the discussions and other class interactions in a professional and civil manner. If you are in doubt, do not post it! Instructors reserve the right to remove any postings deemed inappropriate, unprofessional, or otherwise distracting from the course.

University Polices & Procedures

Note: the following is standard language, but it may not necessarily apply to an online modality.

Academic Guidance in the Event a Student Is Quarantined/Isolated

If you miss a deadline at any point in time during the semester, please reach out to me via email so that we can communicate about how you can maintain your academic progress. If you find yourself too sick to progress in the course, notify your adviser and notify me via email or Brightspace. We will make arrangements based on your situation. Please note that, according to [Details for Students on Normal Operations for Fall 2021](#) announced on the Protect Purdue website, "individuals who test positive for COVID-19 are not guaranteed remote access to all course activities, materials, and assignments." *Related resource: [What to Expect If You're In Isolation](#).*

Academic Integrity

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778. While information may be submitted anonymously, the more information that is submitted the greater the

opportunity for the university to investigate the concern. More details are available on our course Brightspace table of contents, under University Policies.

Incidents of academic misconduct in this course will be addressed by the course instructor and referred to the Office of Student Rights and Responsibilities (OSRR) for review at the university level. Any violation of course policies as it relates to academic integrity will result in a zero grade for that assignment **and** a loss of one letter grade for the course. In addition, all incidents of academic misconduct will be forwarded to OSRR, where university penalties, including removal from the university, may be considered.

Purdue prohibits "dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty." [Part 5, Section III-B-2-a, Student Regulations] Furthermore, the University Senate has stipulated that "the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest." [University Senate Document 72-18, December 15, 1972] Please review Purdue's student guide for academic integrity (https://www.purdue.edu/odos/academic-integrity/).

Accessibility Statement

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are encouraged to let your instructor know, so that you can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as it related to COVID-19, students may submit requests for emergency assistance from the Critical Needs Fund.

Classroom Guidance Regarding Protect Purdue

The Protect Purdue Plan, which includes the Protect Purdue Pledge, is campus policy and as such all members of the Purdue community must comply with the required health and safety guidelines. Required behaviors in this class include: staying home and contacting the Protect Purdue Health Center (496-INFO) if you feel ill or know you have been exposed to the virus, properly wearing a mask in classrooms and campus building, at all times (e.g., mask covers nose and mouth, no eating/drinking in the classroom), disinfecting desk/workspace before and after use, maintaining appropriate social distancing with peers and instructors (including when entering/exiting classrooms), refraining from moving furniture,

avoiding shared use of personal items, maintaining robust hygiene (e.g., handwashing, disposal of tissues) prior to, during and after class, and following all safety directions from the instructor.

Students who are not engaging in these behaviors (e.g., wearing a mask) will be offered the opportunity to comply. If non-compliance continues, possible results include instructors asking the student to leave class and instructors dismissing the whole class. Students who do not comply with the required health behaviors are violating the University Code of Conduct and will be reported to the Dean of Students Office with sanctions ranging from educational requirements to dismissal from the university.

Any student who has substantial reason to believe that another person in a campus room (e.g., classroom) is threatening the safety of others by not complying (e.g., not properly wearing a mask) may leave the room without consequence. The student is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights.

Emergency Preparation

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructor via email. You are expected to read your @purdue.edu email on a frequent basis.

Incompletes

According to the Grades and Grade Reports section of Academic Regulations, "A grade of incomplete (I) is a record of work that was interrupted by unavoidable absence or other causes beyond a student's control..." Further details on these circumstances and the process for assigning types of incompletes are outlined in the regulations. Please contact me as soon as you think an incomplete might be needed in this course and before final course grades are due.

Mental Health/Wellness Statement

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack**.** Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please contact or see the Office of the Dean of Students. Call 765-494-1747. Hours of operation are M-F, 8 am- 5 pm.

If you find yourself struggling to find a healthy balance between academics, social life, stress, etc. sign up for free one-on-one virtual or in-person sessions with a Purdue Wellness Coach at RecWell. Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is completely free and can be done on BoilerConnect. If you have any questions, please contact Purdue Wellness at evans240@purdue.edu.

If you are struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental

health support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office on the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Nondiscrimination Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. A hyperlink to Purdue's full Nondiscrimination Policy Statement is included in our course Brightspace under University Policies.

Protect Purdue Plan

The Protect Purdue Plan, which includes the Protect Purdue Pledge, is campus policy and as such all members of the Purdue community must comply with the required health and safety guidelines. The pledge encourages Boilermakers to take steps including wear a mask in public if risk is high, test if experiencing COVID-19 symptoms, have a personal plan for proper isolation or quarantine, and stay home, away from others, and contact Purdue University Student Health Service (PUSH) or a primary care provider if feeling ill. CDC guidelines state that individuals who have been exposed or develop symptoms of COVID-19 should wear a mask, isolate immediately, and get tested. Any student who has substantial reason to believe that another person in a campus room (e.g., classroom) is threatening the safety of others by not complying with campus guidelines may leave the room without consequence. The student is encouraged to report the behavior to and discuss next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights.

Disclaimer

This syllabus is subject to change. You will be notified of any changes as far in advance as possible via an announcement on Brightspace. Also, monitor your Purdue email daily for updates.