sudokita fall 2022 syllabus updated History

1 contributor

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A Course in Progress: this course is currently being developed as it is offered for the second time. Relevant changes to this course will be posted to this Github repository. New materials will be shared here each week. Major updates will be announced in class and/or via email/Slack.

Introduction to Agricultural Informatics

We will overview current and emerging technologies used in digital agriculture. You will be engaged in learning technology fundamentals (languages, concepts, methods), through seven 2-week projects. These hands-on exercises will allow you to gain a practical understanding of the technology itself, review research and development trends, and debate opportunities and challenges presented by each technology. This course will equip you with basic computational thinking and software development skills for Agricultural Informatics careers.

Learning Objectives

By the end of this course, you will be able to:

1. Demonstrate an understanding of informatics challenges in food and agricultural systems.
2. Develop programming skills to create scripts and web applications to explore, store, manipulate, and view food and agriculture data.
3. Develop computational thinking skills to select appropriate informatics approaches and digital technologies to solve a range of challenges in food and agricultural systems.
4. Conceptualize an informatics solution to solving an open food system or agricultural challenge.

Course Communications

Course Materials: This github repository will contain links to all slides, labs, etc. I will release each module's content one or two weeks at a time.

Course Discussion: Join the course slack channel to chat with the instructors and past students of this course. **Join the Slack Channel**

Student Consultations: Make appointments with me via email or slack.

Purdue Instructor: Ankita Raturi

Slack: Contact @sudokita via Slack direct message for quick general discussion about the course. If it's a question/comment others can benefit from, consider using the more general channels. I will try to respond within 1 working day to Slack messages. We cannot discuss grades, personal matters, and so on via Slack due to FERPA policies. If in doubt, contact me via email/in-person.

Email: Contact ankita@purdue.edu with the email subject: **[ASM 591 AGINF]** for better indexing. Reserve use of email for long and/or complex communications. I aim to respond to email within 2 working days.

Office: ABE Building, Room 4031K. For in-person consultations, make an appointment first. In case we can't meet in person, we will use Zoom for a video-call meeting, as agreed upon via email. I will try to provide in-person appointments within 2 working days of your request.

Teaching Assistant Steven Doyle!

Purdue Logistics

Lectures: ABE 1164. Mondays & Wednesdays @ 1.30pm - 2.20pm.

Labs: ABE 2098. Thursdays, 1.30pm - 3.20pm.

Course Structure & Schedule

This course is divided into eight 2 week modules. Each module consists of 4 lectures, 1 lab assignment that you work on over 2 lab sessions, and 1 quiz that you do online.

The overall course schedule is described below. If you click on each module, you will see details on the lectures, labs, and the quiz. **Specific due dates are all on Brightspace. A submission is required via Brightspace**

Module	Weeks	What's happening?
1 - Web Design	Week 1 & 2	Lectures 1.1-1.4, Quiz 1, Execute Lab 1.1 & 1.2
2 - Data Exploration	Week 3 & 4	Lectures 2.1-2.4, Quiz 2, Submit Lab 1, Execute Lab 2
3 - Web Applications	Week 5 & 6	Lectures 3.1-3.4, Quiz 3, Submit Lab 2, Execute Lab 3, Submit Project Part 1
4 - Data Management	Week 7 & 8	Lectures 4.1-4.4, Quiz 4, Submit Lab 3, Execute Lab 4
5 - User Interfaces	Week 9 & 10	Lectures 5.1-5.4, Quiz 5, Submit Lab 4, Execute Lab

Module	Weeks	What's happening?
6 - Geometric Processing	Week 11 & 12	Lectures 6.1-6.4, Quiz 6, Submit Lab 5, Execute Lab 6, Submit Project Part 2
7 - Future of Ag Tech	Week 13 & 14	Lectures 7.1-7.4, Quiz 7, Submit Lab 6, Execute Lab 7
8 - Reviews and Previews	Week 15 & 16	Lectures 8.1-8.4, Submit Project Part 3

Course Assessments

6 Quizzes will be available on Brightspace. They are due at 5pm every alternating Monday starting in Week 2. Quizzes are multiple choice/short answer, and will be auto graded. These are intended to serve as "participation" checks, and hopefully help you evaluate how you're coping with the course.

7 Labs will be available on Github. Each lab is due at the start of the next 2 week module. Each lab will come with submission instructions, but I will generally expect a timestamp of no later than 5pm the day it is due. There will be a 5 hour no-penalty grace period in case you have technical difficulties with submission.

All parts of the **Project** description and submission instructions are available on Github. Each of the three parts will be evaluated based on a high-level rubric to be provided with the project description.

Late Policy: You can have three "late days" where you submit work one business day late with no questions asked. You can use these for quizzes, labs, and projects part 1 & 2. After that, you will be penalised 5% per day late. *The moment you have any issues, please contact me, and we can discuss options.*

Assessment	Description	Due Dates	Weight
Quizzes	Due every two weeks on the Monday in week 1 of each module		5% total, (your lowest score is dropped)
Labs	Due every two weeks on the Mondays following the end of each module		5% x 5 labs, Lab 4 & 5 are 10%

Assessment	Description	Due Dates	Weight
Project Part 1	Concept motivation: select 3 papers and write a combined reflection on an agricultural informatics problem	9/12/2022	5%
Project Part 2	Concept proposal: a short proposal of a research/development concept	10/10/2022	15%
Project Part 3.1	Concept presentation of your proposed approach/solution in class during lecture and lab time (same day submission).	11/30/2022	10%
Project Part 3.2	Concept writeup to be submitted online	12/08/2022	20%

Grading Scale

In this class grades reflect the sum of your achievement throughout the semester. Grades cutoffs are as follows:

Letter	Percentage
A+	97 and above
A	94 to 96.99
A-	90 to 93.99
B+	87 to 89.99
B	84.00 to 86.99
B-	80.00 to 83.99
C+	77.00 to 79.99
C	74.00 to 76.99
C-	70.00 to 73.99
D+	67.00 to 69.99

Letter	Percentage
D	64.00 to 66.99
D-	60.00 to 63.99
F	59.00 and below

Course Feedback & Evaluation

This is the second offering of this "special topics" course, which means components are actively under development and there may be bugs! I would love to hear about your experience, get feedback on the course materials, and generally learn more about where and how this course fails/succeeds to meet your needs. No need to wait till the end!

Reporting issues in Github: Found a bug in the code, slides, syllabus, or other materials? Have a suggestion for how to improve this course? Submit an "issue" to this repository! Alternatively, send a message on the "issues" slack channel.

Course Evaluation: I encourage you to submit the standard course evaluation form as well. This will be very helpful in helping refine and revise this course to deliver a better student experience!

Support & Policies

Attendance Policy

This course is designed in a hybrid model, with some face-to-face meetings and others completed remotely. UUniversity policy states that students are expected to be present for every meeting of the classes in which they are enrolled. For the purposes of this course, being “present” means attending all face-to-face meetings unless you are ill or need to be absent for reasons excused by University regulations: grief/bereavement, military service, jury duty, parenting leave or certain medically excused absences (go to the Office of the Dean of Students (ODOS) website for details on how to submit those requests). Being “present” also means participating remotely and completing work assigned for days when we do not meet face-to-face. This work is required to help you meet the course learning outcomes. These times count toward the course contact hours and your course grade.

That said, life is complicated, and you can contact me if you have any challenges/concerns with attending classes in-person.

Academic Guidance in the Event of Quarantine/Isolation

Your health and safety is important. If you must miss class 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. For COVID-19 concerns, please see the Fall 2022: What you need to know guidance published July 27. 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 particular situation.

Accessibility

Purdue University is committed to making learning experiences accessible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

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 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.

Make sure your lab Github repositories are "private" for the duration of the course, to prevent others from simply copying your code. I trust that you will work independently, and will evaluate your work based on your "commit" history (i.e., you should NOT just commit the ENTIRE lab 5 minutes before the deadline). In general, writing code with the help of the internet is permissable, i.e., you can ask questions on Stack Overflow, discuss the problems with each other on Slack. Ultimately, I have a policy in which I trust that you are doing the right thing, unless I see evidence to the contrary.

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.

Mental Health and 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-5pm.

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're 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. The CAPS website also offers resources specific to situations such as COVID-19.

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.

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 to this Github repository. You are expected to read your @purdue.edu email on a frequent basis.

Notes on Syllabus Authorship

Some of the generic statements and links to further infromation are provided via the Purdue Syllabus Template. We have tweaked them for applicability to this course, in some cases, adding coure-specific language.