

Berrien Springs Partnership Lab Syllabus and Instructor Qualifications

LABS (CLASSES) ARE PROVIDED AS AN EDUCATIONAL SOURCE FOR PBL (PROJECT BASED LEARNING)

COMMUNITY CLASS TITLE: Click, Type, Calculate: Your Guide to Spreadsheets

GRADE OR AGE LEVELS: Grades 6 – 12 (younger students may need more assistance than older students)

FORMAT: Online

DAY AND TIME OF THE WEEK: Asynchronous course; students will complete assignments by weekly deadlines.

TOTAL REQUIRED HRS: 1-2 hours per week

TOTAL SEMESTER HOURS POSSIBLE: 16 – 32 hours

LOCATION: Online

INSTRUCTOR: Mark Pelfrey

CONTACT INFORMATION: pelfreyfamilyschooling@gmail.com

INSTRUCTOR QUALIFICATIONS (may attach a separate page if necessary):

I am a Professor of Mathematics at a local community college, where I have taught since 2012. I am also the co-founder and co-Director of our College's Honors Program, which is entering its 10th year in 2025-2026, and I am QM Certified in online course design. I work regularly with students in my courses to remind them (or teach them for the first time) how to complete tasks essential to our courses that require the use of computer technology. I also do one-on-one advising with Honors Program students, and regularly work with them on seeking scholarships, internships, and admittance to their next program of study. I am a big believer in education, and believe it is a gateway to prosperity for so many students – I look forward to working with each and every one of my students to help them find this out for themselves!

COURSE DESCRIPTION (OVERVIEW):

In this hands-on course, students will gain essential spreadsheet skills using Google Sheets and, optionally, Microsoft Excel – some of the most powerful tools for organizing, analyzing, and presenting data. Whether tracking a budget, planning a schedule, or building a gradebook, students will learn to confidently navigate spreadsheet platforms, input and format data, use formulas and functions, create charts, and produce polished reports.

With a focus on Google Sheets (due to accessibility and cloud-based features), we will also make comparisons to Microsoft Excel, ensuring students are prepared to work in either program. Weekly assignments build real-life skills, and introductions to advanced topics like pivot tables and IF statements help students explore deeper functionality. By the end of the

course, students will complete a final project that showcases their spreadsheet abilities in a format of their choice. No prior spreadsheet experience required – just curiosity and a willingness to learn more about these powerful programs!

Students will need regular access to a computing device that can run these applications, and will probably find the course easier with a keyboard/mouse as well.

SYLLABUS/OUTLINE: WEEKLY BREAKDOWN OF PROJECT-BASED LEARNING LAB ACTIVITIES

Week 1: Introduction to Spreadsheets

- **Topics:** What spreadsheets are, overview of Google Sheets vs. Microsoft Excel
- **Skills:** Opening/saving spreadsheets, navigating interfaces, understanding cells and ranges
- **Assignment:** Create a personal interest spreadsheet with 3 columns and 5+ rows of data

Week 2: Entering and Formatting Data

- **Topics:** Data types, cell formatting tools
- **Skills:** Adjusting column/row sizes, applying text and number formatting
- **Assignment:** Format a daily routine spreadsheet with different text styles and formats

Week 3: Basic Formulas and Math Operations

- **Topics:** Writing simple formulas, using cell references
- **Skills:** Performing basic math with spreadsheet formulas
- **Assignment:** Create a grocery list and calculate total costs using formulas

Week 4: Functions: SUM, AVERAGE, MIN, MAX

- **Topics:** Introduction to common spreadsheet functions
- **Skills:** Using built-in functions to analyze data
- **Assignment:** Analyze fictional test scores using SUM, AVERAGE, MIN, and MAX

Week 5: Charts and Graphs

- **Topics:** Chart types and uses
- **Skills:** Creating and customizing basic charts
- **Assignment:** Make two charts from a sample dataset

Week 6: Sorting and Filtering Data

- **Topics:** Sorting and filtering options
- **Skills:** Organizing data using sort and filter tools
- **Assignment:** Sort and filter a fictional student dataset in various ways

Week 7: Conditional Formatting

- **Topics:** Highlighting data based on rules

- **Skills:** Using conditional formatting tools
- **Assignment:** Highlight high and low values in a gradebook spreadsheet

Week 8: Data Validation and Drop-down Lists

- **Topics:** Restricting input and creating dropdowns
- **Skills:** Setting up validation rules and menus
- **Assignment:** Design an attendance tracker with drop-down menus

Week 9: Real-Life Application – Budget Planning

- **Topics:** Building a monthly budget
- **Skills:** Organizing data, using formulas for totals and percentages
- **Assignment:** Create a sample monthly budget with calculations

Week 10: Real-Life Application – Grade Tracker

- **Topics:** Tracking academic performance
- **Skills:** Creating a simple gradebook with totals and averages
- **Assignment:** Build a tracker for subject or assignment scores

Week 11: Real-Life Application – Calendar and Scheduling

- **Topics:** Creating a calendar layout
- **Skills:** Using date functions and formatting
- **Assignment:** Make a study schedule or calendar with color-coded events

Week 12: Collaboration in Google Sheets

- **Topics:** Sharing and real-time editing
- **Skills:** Using collaboration tools like comments and version history
- **Assignment:** Collaborate on a shared spreadsheet and leave comments

Week 13: Exploring Pivot Tables

- **Topics:** Intro to summarizing data with pivot tables
- **Skills:** Creating a simple pivot table
- **Assignment:** Summarize data from a dataset using a pivot table

Week 14: IF Functions and Nested Formulas

- **Topics:** Logical functions in spreadsheets
- **Skills:** Writing and nesting IF formulas
- **Assignment:** Assign letter grades using an IF formula based on scores

Week 15: Importing and Exporting Data

- **Topics:** File types and conversions
- **Skills:** Uploading, editing, exporting spreadsheets
- **Assignment:** Convert and export a spreadsheet as PDF or Excel

Week 16: Final Project – Spreadsheet Portfolio

- **Topics:** Course reflection, real-world spreadsheet application
- **Skills:** Combining multiple tools in one workbook
- **Assignment:** Submit a final project workbook with at least two sheets (budget, planner, tracker, etc.) and include a one-page writeup of why this tool will be helpful to your life.

COURSE OBJECTIVES AND APPROXIMATE TARGET DATES:

Each week, students will check in using Google Classroom. Students will receive their assignments on Sunday evenings, and will need to submit their assignments by Sunday of the following week. When each assignment is complete, students will upload a document or photo of their work and answer reflection questions about their experience completing that week's assignment.

STUDENT ASSESSMENT - what will be used to evaluate student progress and/or end of semester pass/fail status?

- 1) Student agrees to attend at least 80% of class sessions/lessons offered. Attendance is kept online and tracked by Partnership staff. Failure to meet 80% or be on track to meet 80% may result in program discontinuation.
- 2) We will keep track of course progress in Google Classroom. Your photos/document submissions and comments will be proof of your participation in the course for each week.