

DataJam Modular Curriculum

- Designed for a course that meets every day for 40 mins (200 mins / week)
- Semester course

MODULE #1	Introduction to the Big Data Industry <ul style="list-style-type: none">• Course Introduction• Preview the field of big data, universities, careers, data collection and usage applications, ethical issues• Module #1 Lesson Plans
MODULE #2	Open Data, Asking Questions and Introduction to Spreadsheets (as a class) <ul style="list-style-type: none">• Open Data Sources (Western PA Regional Data Center) - Explore the data set• Module #2: Introduction to Spreadsheet Analysis
MODULE #3	First Mini-Project (individual project) <ul style="list-style-type: none">• Practice the skills they acquired in Module #2• Students may select a dataset and brainstorm idea for questions that might be answerable from the data• Mirrors the Pittsburgh DataJam Project• Module #3 Lesson Plans
MODULE #4	Introduce Statistical Significance, R-squared, finding correlations <ul style="list-style-type: none">• Introduction• Practice activity together• Finding correlations individually• Individual project• Module #4 Lesson Plans

MODULE #5	<p>Mapping</p> <ul style="list-style-type: none"> ● Introduce Mapping Programs & Uses ● Mapping Activities ● Mapping Project ● Module #5 Lesson Plans
MODULE #6	<p>Data Journalism & Project (ex: analyzing Pittsburgh Business Times School Rankings, Best Neighborhoods, etc.)</p> <ul style="list-style-type: none"> ● Look at current examples of data journalism ● Develop your own metric and rating system for a given topic ● Present your findings ● Module #6 Lesson Plans
MODULE #7	<p>Analyze a Current Event Problem Together and Solve (ex: COVID-19)</p> <ul style="list-style-type: none"> ● Find data sets ● Create spreadsheet ● Formulate questions ● Analyze data ● Answer questions/Create visuals ● Class discussion
MODULE #8	<p>Project for Your School or Community Together and Solve (ex: E-Hall Pass Data)</p> <ul style="list-style-type: none"> ● Acquire data sets (may need help from school or local authorities) ● Create spreadsheet ● Formulate questions ● Analyze data ● Answer questions/Create visuals ● Present to school or local authorities

MODULE #9	Pittsburgh Dataworks Big DataJam Project: <ul style="list-style-type: none">● Big DataJam Project Proposal<ul style="list-style-type: none">○ Identifying a topic for your project: Pitt Data Diaries Video #1● Research Data Sets● Create a Spreadsheet● Analyze Data● Create & Print a Poster● Create a Presentation Slideshow & Practice Presenting
EXAM	Semester Exam (optional) <ul style="list-style-type: none">● Big Data Semester Exam● Feel free to update with your own scenarios based on current events and the interests of students in your class.