PROJECT GOALS

Utilize the data provided and merge with external data that you identify to add value. Your goal is to create:

- i) An analytically defensible argument for a business strategy for the USC Suzanne Dworak-Peck School of Social Work based upon implementable analytics
- ii) Effective visualization to help discover and display outcomes

PROJECT STAGES

<u>Stage I – Explore, Identify, & Plan (Time allowed – ONE week)</u>

Explore the provided data, identify and append appropriate publicly-available external data, and prepare a "two pager" including the following sections:

- A. What business question can be answered by the data you have put together?
 - a. Why is that an important problem to solve?
 - b. Examples:
 - i. How do I predict how many units will be enrolled by all my students in a future semester based upon the data provided?
 - ii. What makes an area ideal for recruitment? Which geographical areas are ideal for recruitment? Are they different for the virtual and campus programs?
 - iii. What is the best (overall) recruitment strategy to increase revenue? What factors could improve the strategy?
- **B.** How will you approach the answering these questions?
 - a. What data did you add to the dataset and what does it offer in insights?
 - b. What is your data discovery method?
 - c. What is your analytics strategy for example a forecasting model utilizing logistic regression or a prescriptive model using decision trees

Stage II- Discover, Build & Converge (Time allowed – TWO weeks)

Build the analysis that supports a recruitment strategy for USC Suzanne Dworak-Peck School of Social Work. The strategy should consider various constraints (e.g. resources, schedules, etc.), clearly define methodologies (e.g. student characteristics and geographical factors) and establish outcome expectations (predictions – of revenue, class size, type, etc.). The strategy may address all or some of the stage I discussed business problems and approaches defined by your team and others. The analysis should be capable of running on new data if your data preparation is followed. Output should either be a visualization with metrics or metrics with which you create a visualization. Remember that the goal is to answer a business question, so complex visualizations are not necessary. Be prepared to demonstrate and discuss your chosen methods, assumptions, and goals.



Stage III – Adjust, Present & Defend (Time allowed – ONE week)

Deliver a C-suite presentation that explains the value of your analysis. The presentation should include your strategy, outcomes, and constraints. Explain how this analysis would support strategy for the department and why the strategy is the right strategy.

PROVIDED DATA

You will be provided a dataset with the following variables*:

- Randomized Unique ID
- Program Length
- Starting Cohort
- Virtual or Campus
- FIP**
- ZIP

This data will be provided for students beginning from fall 2014 through summer 2018 for the Masters in Social Work Program. Revenue for the school is calculated from the total units taken by all students each semester * Tuition Rate.

The units taken each semester for these students depends on program length as follows:

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Full Time	15	17	14	14	-	-
Part Time	6	6	6	14	14	14

For USC tuition rates visit: https://classes.usc.edu/

Outcome data:

You will be provided the graduation rates by program length

Other information:

- Campus students only attend fall and spring semesters, while virtual students attend year-round
- Campus students only enroll new students each fall, while virtual students enroll a new cohort each semester

DELIVERABLES SUMMARY

Stage I:

• One-page report: Explore, Identify & Plan

Stage II:

A functional analysis that could be implemented with corresponding visualizations

Stage III:

An executive-level presentation



^{*}Definition of the data fields will also be provided as a separate document

^{**}FIP data relates to the U.S. Census and allows easy augmentation of the provided dataset with publicly available data