**S12**

**Final Assessment Project**

**You can work individually or in a group of up to 2 students.**

**Goals and Expectations:**

* The aim of your presentation is to create a video (or several videos) that show the following:

|  |  |
| --- | --- |
| Topic | Done ☺/ Not yet ☹ |
| Using an example and definitions, teach 4 out of these 8 topics:* Probability using combinations
* Probability using permutations
* Binomial probability distribution
* Hypergeometric probability distribution
* Measures of central tendency
* Measures of spread
* Normal distribution and z-scores
* Confidence intervals
 |  |
| 2 examples of deceiving statistics. (Misuse of data, bad graphs, intentional sampling bias, …) |  |
| 2 examples of useful application of statistics. |  |
| Explanation and examples of 4 types of bias. |  |
| Explain what Statistics Canada does and why collecting data through census matters. Explain what is census.  |  |
| 1 example of data/graph that shows correlation as well as causation. |  |
| 1 example of data/graph that shows that correlation does not necessarily mean causation.  |  |
| References for your sources of information, images, examples, and inspiration. |  |

**Assessment:**

* **This assessment replaces your final exam and contributes 20% to your final grade.**
* **If you are earning a high proficient or extending level (80% or higher) you do not need to write the final exam.**
* **If you would rather write the exam or your semester mark is below 80% you will write the final exam during the exam period, that will be specified to you before the exam week.**