

Predictive Analytics Exam Update

Revised April 12, 2021

The prior update has been revised to provide additional clarification.

This revision has been provided by the exam committee to further clarify and inform candidates of modest changes being made to the PA exam beginning with the June 2021 administration. There are no changes to the syllabus or learning objectives for the exam. The committee will not be releasing a sample exam. The PA syllabus, learning objectives, modules and past exams/solutions provide the appropriate framework for candidate preparation.

Task Instructions and Context

Additional information providing context for the tasks in the exam will continue to appear in the business problem section. It will also be included in italicized text placed between plain-text tasks. The additional information in italicized text will apply only to the tasks that follow them. Information may be provided on the data, target variable, models to consider, or other elements to clarify the predictive modeling context for the tasks. Unlike prior exams, the context for the tasks may change from task to task, including changes to the target variable. The project statement will make the changing context clear. Additional files besides the original data file may be introduced to reflect the changed context.

Some tasks may ask candidates to carry out analysis with less specificity than has been the case in recent exams, as some learning objectives require the candidate to plan and execute analytical steps as appropriate for the context. The wording of the tasks will be very similar to recent exams, with some having a single item to address and others multiple items listed in bullet points.

Communication Elements

Communication will continue to comprise 30-40% of the points for the exam. However, rather than being asked to write an executive summary at the end of the exam, candidates are now prompted within certain tasks to write “for a general audience.” In those cases, candidates should use non-technical language and other communication techniques as appropriate for an executive summary. Technical writing remains the default for the remainder of the tasks where writing “for a general audience” is not indicated.

Writing and Executing in R using RStudio

The PA exam syllabus has always included an expectation that candidates develop a basic familiarity with R, used extensively in the curriculum for this exam. Specifically, its learning objective statements include, “write and execute basic commands in R using RStudio,” and “create a variety of graphs using the ggplot2 package.”

The RMD template will continue to provide the needed code for the vast majority of tasks in the exam. However, one or two tasks may require candidates to use R commands not explicitly provided. These commands will be basic items that are repeated many times throughout the curriculum and would be familiar to those who have worked through the curriculum. Examples include:



- using basic mathematical operators and functions such as `exp()` and `log()`
- selecting, modifying, and summarizing data in a dataframe
- displaying data from a dataframe in common types of plots, using `ggplot2`
- modifying or adding a formula or other parameters to model-fitting functions like `glm()` and `rpart()`
- extracting and displaying results from a fitted predictive model

Candidates will not be expected to construct loops, write functions, or use other programmatic techniques in R. The scope is limited to using single-line commands, as stated in the syllabus, and arranging them in an appropriate order within an Rmd file.

Candidates will have access to these two R cheat sheets ([Base R](#) and [Data Visualization](#)) in addition to having access to Help within RStudio.

To summarize, the code provided for the majority of tasks involving R code will be very similar to that of recent exams; however, one or two tasks may indicate that for the remainder of the task candidates will need to supply the code and will not be provided with every command needed to complete the task.

Exam Preparation

Candidates should continue to prepare for this exam by studying and mastering all elements of the syllabus and reviewing past exams and model solutions, which continue to be a good guide for the content of the exam. As described above, candidates should spend some time reviewing R coding.

Candidate Number

Candidates will be asked to include their candidate number (never a name) in the files they submit to help processing of candidate materials. Your candidate number can be found on your exam registration receipt. Be sure to bring your candidate number with you to the exam center. The Test Center Administrator will allow you to write your candidate number on your scratch paper or will write your number on the scratch paper for you, so you will have the number available at your testing station.