

# **Assignment 3: Scientific Report**

## **Marking rubric 2022-23**

### **Assessment Criteria**

Assignment 3 has two components: a group scientific report (max 2 pages); and an individual executive summary (max 1 page).

The group report will be assessed in terms of:

- Content: 40%
- Structure: 20%

The individual executive summary report will be assessed in terms of:

- Executive (non-technical) summary: 40%.

A summary of the rubric used for each of the above criteria is described in turn.

<b>Content - 40%</b>	
<b>A1</b> 90-100%	The report provides a very clear description of the model selection process that has been applied to the data and which is well implemented. The absolute goodness-of-fit tests/measure are highly appropriate and described clearly. There is excellent discernment in relation to the analyses performed and results that are presented, including in relation to the estimation of the total population size and any associated measure of uncertainty. The discussion and interpretation of the results are concise, insightful and informative. The report is very well written with virtually no grammatical or spelling errors.
<b>A2</b> 80-89%	The report provides a clear description of the model selection process that has been applied to the data. The absolute goodness-of-fit tests/measure are appropriate and described fairly clearly. There is good discernment in relation to the analyses performed and results that are presented, including in relation to the estimation of the total population size and any associated measure of uncertainty. The discussion and interpretation of the results are concise and informative. The report is well written with very few minor grammatical and spelling errors.
<b>A3</b> 70-79%	The report mostly demonstrates a clear description of the model selection process that has been applied to the data but some minor points may be a little unclear or lacking in clarity. The absolute goodness-of-fit tests/measure are largely appropriate and described fairly clearly but possibly with some minor issues. The results are presented for the total population size, but there may be some issues in relation to the estimation of the uncertainty associated with the estimate. The discussion and interpretation of the results provides some useful insight. The report is generally well written but may contain a few minor grammatical and spelling errors.
<b>B</b> 60-69%	The report provides a description of the model selection process but there may be some lack of clarity and/or some reasonably minor issues in its application to the data. The absolute goodness-of-fit tests/measure are limited, there may be issues in relation to their implementation and the description may lack some clarity. The results are presented for the total population size, but there may not be any level of associated uncertainty. The discussion and interpretation of the results are fairly limited and/or there are statistical errors. The report is generally well written but may lack clarity in places and contains several grammatical and spelling errors.
<b>C</b> 50-59%	The report provides a rather limited description of the model selection process which is confusing in places or lacks clarity. The application of the approach to the data may contain several issues. The absolute goodness-of-fit tests/measures are not very appropriate, poorly implemented and/or their description lacks clarity. The results are presented for the total population size, but these may be incorrect, and there is no associated level of uncertainty. The discussion and interpretation of the results are very limited and/or there are several statistical errors. The report lacks clarity in several places and contains numerous grammatical and spelling errors.
<b>D</b> 40-49%	The report provides no description of the model selection process and the model-fitting to the data contains numerous statistical errors. The absolute goodness-of-fit tests/measures are not appropriate, incorrectly applied and/or their description confusing. The results that are presented are wrong. There is very little discussion and interpretation of the results. The report lacks clarity throughout and contains a large number of grammatical and spelling errors.
<b>E-H</b> <40%	The report contains no description of the model selection process or demonstrates no understanding of model selection in general. The absolute goodness-of-fit tests/measures are missing. The statistical analyses are wrong throughout and the results presented are confusing and/or incoherent. The report is very difficult to read due to a lacks clarity throughout and/or is incomplete. There are major grammatical and spelling errors.

<b>Structure - 20%</b>	
<b>A1</b> 90-100%	The report has a very clear logical and ordered structure which evidences exceptional attention to detail. There are clear and informative section and subsection headings to guide the reader through the different aspects of the statistical analyses. The sections are well proportioned in relation to their content and importance. The structure aids the clarity of the report and also highlights any important results. There is an appendix containing the computer code which is commented with informative section headings.
<b>A2</b> 80-89%	The report has a clear logical and ordered structure which evidences some attention to detail. There are fairly clear and informative section and subsection headings to guide the reader through the different aspects of the statistical analyses. The sections are fairly well proportioned in relation to their content and importance. The structure generally aids the clarity of the report and also highlights some interesting results. There is an appendix containing the computer code which is commented with section headings.
<b>A3</b> 70-79%	The report has a fairly clear logical and ordered structure. There are generally clear and informative section and subsection headings to guide the reader through the different aspects of the statistical analyses. The sections may be a little unbalanced in relation to their content and importance. The structure generally aids the clarity of the report but there may be some minor issues. There is an appendix containing the computer code.
<b>B</b> 60-69%	The report has some logical and ordered structure, but this is a little confusing in places. There are section and subsection headings to guide the reader through the different aspects of the statistical analyses but these may be vague. The sections are unbalanced in relation to their content and importance. The structure supports some of the information contained in the report but there are several issues that lead to some lack of clarity and/or confusion. There is an appendix containing the computer code.
<b>C</b> 50-59%	The structure of the report is confusing in several places. There are section and subsection headings but these may be misleading or unhelpful. The sections are very unbalanced in relation to their content and importance. There is an appendix containing some computer code.
<b>D</b> 40-49%	The structure of the report is confusing throughout leading to numerous misunderstandings. There may be no section or subsection headings; or if there are section and subsection headings these are inappropriate. The sections are very unbalanced in relation to their content leading to an increased lack of clarity. There is no appendix containing the computer code.
<b>E-H</b> <40%	There is no logical structure leading to a very confused report. There are no section or subsection headings. The lack of any coherent structure means that it is difficult to extract any meaningful results. There is no appendix containing the computer code.

<b>Executive summary - 40%</b>	
<b>A1</b> 90-100%	The executive summary is concise and non-technical throughout. There is excellent discernment in the choice of material to include and the main points of interest are easy to extract. The data are briefly summarised and the main results are clearly stated from the statistical analyses performed. Additional useful insight is also provided in relation to the results from the statistical analyses performed. The summary contains virtually no grammatical or spelling errors.
<b>A2</b> 80-89%	The executive summary is non-technical throughout. There is good discernment in the choice of material to include and the main points of interest are fairly easy to extract. The data are briefly summarised and the main results are clearly stated from the statistical analyses performed, although some additional unnecessary details may be included. Additional insight is also provided in relation to the results from the statistical analyses performed. The summary may contain a very few minor grammatical and spelling errors.
<b>A3</b> 70-79%	The executive summary is mostly non-technical, although there may be a few minor technical words or details provided. There is reasonable discernment in the choice of material to include and the main points of interest are relatively clear. The data are briefly summarised and the main results are clearly stated from the statistical analyses performed, although some additional unnecessary details may be included or there may be some minor lack of clarity in places. Some additional insight may also be provided in relation to the results from the statistical analyses performed. The summary may contain a few minor grammatical and spelling errors.
<b>B</b> 60-69%	The executive summary is reasonably non-technical but there are several technical aspects. There is some discernment in the choice of material to include and most of the main points of interest are included. The data are briefly summarised and the main results are stated from the statistical analyses performed, although additional unnecessary details may be included or there may be some lack of clarity in places. An attempt at some additional insight may also be provided in relation to the results from the statistical analyses performed. The summary contains several grammatical and spelling errors.
<b>C</b> 50-59%	The executive summary is non-technical in places but there is a reasonable amount of technical details or wording included. There is limited discernment in the choice of material to include and it is difficult to extract the main points of interest. The data are briefly summarised and the main results are stated from the statistical analyses performed, but there are significant omissions or inaccuracies. The summary contains numerous grammatical and spelling errors.
<b>D</b> 40-49%	The executive summary attempts to be non-technical but it is largely a technical report and difficult to read for a non-statistician. There is virtually no discernment in the choice of material to include and several main points of interest are not included. There is very little mention of the data and there are several significant errors in relation to the main results presented that do not match the statistical analyses conducted. The summary contains a large number of grammatical and spelling errors.
<b>E-H</b> <40%	The executive summary is essentially a technical report and very difficult to read for a non-statistician. There is no discernment in the choice of material to include and most of the main points of interest are not included. There is no mention of the data and there are numerous significant errors in relation to the main results presented that do not match the statistical analyses conducted. The summary contains major grammatical and spelling errors.