

## AE4423 - Airline Planning and Optimization

Assessment matrix for Assignment Problems 3 & 4 - 2021/2022

Question	Criteria	Wrong or missing	Not sufficient	Satisfactory	Good	Very good
<b>Problem 3</b>	<b>Model formulation</b>	The model is not presented or there are major formulation errors	The model is incomplete, contains major errors or the methodology adopted is not discussed in sufficient detail.	The model is incomplete, and/or there are major errors in the mathematical formulation and/or the discussion of the methodology adopted is incomplete	The model is complete, but minor errors are found in the mathematical formulation or the discussion of the methodology adopted could be improved	The model is complete, mathematically correctly formulated and the methodology adopted is discussed in good detail
	<b>Results – initial RMP</b>	No results of the initial RMP are presented or the results include major errors	The results of the initial RMP are presented with significant errors from the expected result or not all KPIs asked are presented	The results of the initial RMP are presented with major deviation from the expected result and all KPIs asked are presented	The results of the initial RMP are presented with minor deviation from the expected result and all KPIs asked are presented	The results of the initial RMP are presented and are according to the expected results and all KPIs asked are presented
	<b>Results - iterations</b>	No results from the column generation are presented or the results include major errors	The results from the column generation are presented with significant errors from the expected result or not all elements asked are presented	The results from the column generation are presented with major deviation from the expected result and all elements asked are presented	The results from the column generation are presented with minor deviation from the expected result and all elements asked are presented	The results from the column generation are presented and are according to the expected results and all elements asked are presented
	<b>Final Results</b>	No results of the initial RMP are presented or the	The results of the initial RMP are presented with significant errors from	The results of the initial RMP are presented with major deviation from the	The results of the initial RMP are presented with minor deviation from the	The results of the initial RMP are presented and are according to the

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		results include major errors	the expected result or not all KPIs asked are presented	expected result and all KPIs asked are presented	expected result and all KPIs asked are presented	expected results and all KPIs asked are presented
	<b>Results – analysis and critical assessment</b>	No discussion or analysis of results is provided	Results are briefly discussed, but no further analysis is provided	Results are discussed, but no further analysis or critical assessment is provided	Results are discussed and analyzed, with limited critical assessment of the results and model	The results are clearly discussed and analyzed, and a good critical assessment of the results and model is provided

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<b>Problem 4</b>	<b>Model reformulation</b>	The model is not presented or there are major formulation errors	The model is incomplete or the methodology adopted is not discussed in sufficient detail.	The model is complete with minor errors in the mathematical formulation but the explanation of the model is incomplete	The model is complete with no errors, but the explanation of the model could be improved	The model is complete, mathematically correctly formulated and the model is explained and discussed in good detail
	<b>Solution technique</b>	The solution technique to solve the problem is not discussed	The solution technique to solve the problem is incomplete or the methodology is not discussed in sufficient detail.	The solution technique to solve the problem is presented with minor errors in the process description	The solution technique to solve the problem is presented with no errors, but the discussion could be improved	The solution technique to solve the problem is presented with no errors and the methodology adopted is discussed in good detail
	<b>Results – IFAM Schedule model [Bonus question]</b>	No IFAM schedule results are presented or the results make no sense	The new schedule is presented but it is not clear what is the impact in the itineraries or there is no coherence.	The new schedule is presented but it does not correspond to the optimal solution. The itineraries served are discussed and are coherent with the schedule.	The new schedule is presented and it corresponds to the optimal solution. The itineraries served are discussed and are coherent with the schedule.	The new schedule is presented and it corresponds to the optimal solution. The itineraries served are discussed and are coherent with the schedule. The results are presented attractively and intuitive way to understand the impact on the itineraries

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	<b>Results – analysis and critical assessment</b> <b>[Bonus question]</b>	No discussion or analysis of results is provided	Results are briefly discussed, but no further analysis is provided	Results are discussed but no compared with the results from the previous problem	Results are discussed and there is a comparison with the results from the previous problem	Results are clearly discussed and analyzed, and a good critical assessment of the results and model is provided, including a discussion of using such solution technique.

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Reporting	Overall report quality	The report does not fulfil basic requirements in terms of structure, content, grammar, layout and clarity. It is a poor document, illogical structure, no or irrelevant arguments. Grammar and spelling are so poor that they make the document unreadable.	The report hardly fulfils basic requirements in terms of structure, content, grammar, layout and clarity. Poorly expressed, argumentation often replaced by assumption or assertion or omitted. Structure and transitions need considerable improvement and the document contains serious spelling and grammar errors.	The report fulfils basic requirements in terms of structure, content, grammar, layout and clarity. Reasonably expressed, argumentation sometimes replaced by assumption or assertion. Structure and transitions need improving and the document contains quite a few spelling and grammar errors. The document is within the pages limit.	The report fulfils all requirements in terms of structure, content, grammar, layout and clarity. Expressed well, and with a clear structure. Arguments could be improved. The document has a good flow. Transitions sometimes not very effective. The document contains some spelling and grammar errors. The document is within the pages limit.	Very good report in terms of structure, content, grammar, layout and clarity. Clear and persuasive and well-structured document. The document has a smooth flow with effective transitions, with only minor spelling and grammar errors. The document is within the pages limit.