AUSTRALIAN
UNIVERSITIES
ROCKET
COMPETITION

AURC

2024 AURC
Deliverables Requirements

Version 1.0: 28th November 2023

AYAA

Table of Contents

Revision History

Revision	Description	Date
Version 1.0	Initial Release	28/11/2023

1   Purpose and Scope

This document outlines the required scope and marking rubrics for each deliverable of the 2024 Australian Universities Rocket Competition (AURC). This document will be repeatedly updated in accordance with the "2024 AURC Key Dates" timeline to include further information about assessable items as the competition progresses. This document does not include information pertaining to the list of assessable items and their associated due dates, submission instructions, penalties and judging. Subsequent information is available in the "2024 AURC Rules" document.

2   General Report Guidelines

2.1   Formatting

- Submissions must be made as a single pdf document.
- If completed in Microsoft Word or similar, the report must be written in size 12 pt Times New Roman, have 'single' line spacing and must be presented in a professional and consistent manner, alternatively the use of LaTEX or comparable typesetting software is also permitted.
- All submissions must begin with a cover page which lists the team number, team name, university, title of deliverable, word count, due date and date submitted.
- Any academic referencing method is acceptable, but it must be applied consistently.
- Submitted documents must follow the naming format of "Team_#_assesed_item.pdf", for example "Team_1_Progress_Report_1.pdf".

2.2   Language

Reports must be written in English. Clear and concise presentation is important; do not confuse the encouraged brevity of components with the amount of thought required. Research is vital in producing a high-quality report. Spelling, punctuation, grammar and formatting errors will be heavily penalised. It is recommended that you proofread your work thoroughly and ensure it is readable, logical, free from errors and consistently formatted (e.g. dot point formatting is consistent).

2.3   Word or Page Limits

Written reports that exceed the allowable word or page limit will only be marked based on the information included within the limit. Appendices, references and cover pages do not contribute to the word or page limit. Information provided in an appendix section should be supporting documentation only, and the report must be assessable without reading appendices unless otherwise specified in the marking criteria.

3 Progress Report 1

Progress Report 1 is the first assessed deliverable for the 2024 AURC. The purpose of this report is to provide an overview of each team's progression and to gain a better understanding of how each rocket project is being managed and executed.

This progress report has a maximum page's length of 10 pages of main matter. Please use the recommended page limits as a guide for how much time and effort should be put into writing each section.

Progress report 1 submissions are required to have the following information:

- **Executive Summary** (1 page) - A clear, concise, and informative overview of the rocket and competition category, the project's objectives and goals
- **Introduction** (1/2 page) – Should provide an overview of the project. Includes the project aim in the context of the technical background.
- **Design overview** (1-2 pages) - A conceptual design, brief overview of the rocket, its planned subsystems, and functions. A satisfactory motor selection is also expected.
- **Systems Engineering and Design Methodology** (2-3 pages)
  - o **Systems engineering process**, which includes the following:
    - ● **Problem definition** - From the initial statement given in the rules and regulations what is your team's interpretation? Use this to develop your problem context and hence definition.
    - ● **System requirements** - This can be developed from your problem definition and design overview. These requirements should show clear understanding of the problem and are concise, convincing, and clearly expressed aligning with the "INCOSE guide to writing requirements" good practice.
  - o **Overview of design methodology and process** - This section will discuss how your team will tackle the engineering project.
    - ● How will your team draw on existing design methodologies and adapt it. What procedures will your team use to implement design decisions and changes?
- **Team management and organisation** (2-3 pages)
  - o **Overview of team management structure and responsibilities**
    - ● Concise overview of team management structure, roles, and their responsibilities for the project.
    - ● Demonstrates fair task allocation or justifies tasks allocation for various roles.
  - o **Overview of communication management**
    - ● Concise overview of communication processes and procedures utilised to ensure efficient communication within the team.
    - ● Identifies and demonstrates appropriate communication with various project stakeholders.
- **Overview of project budget**
  - o Budget is discerning in its set out and is representative of all costs relevant to the project.
  - o Contingencies are strongly justified.
- **Overview of project timeline, milestones and launch schedule.**
  - o All major competition milestones identified with a clear and well thought out plan of how and when they will be met.
  - o Reasonable project technical and management milestones are disclosed.
- **Conclusion** (1/2 page) - should summarise the report in terms of its goals and projected milestones.
- **Appendices** – if necessary

Appendix A: Progress Report 1 Marking Rubric

Item	High Distinction 90+ pts	Distinction 79-89 pts	Credit 55-78 pts	Pass 38-54 pts	Fail <37 pts	Score
Executive Summary (5%) A clear, concise, and informative overview of the rocket and competition category, the project's objectives and goals	5 pts Executive summary is comprehensive, succinct and informative. It introduces the project background, problem addressed, and approach taken. Discussion of the key findings throughout the process, along with the overall recommendations. Structure, cohesion, and language used enhance communicability.	4 pts Executive summary explains the background, problem addressed and approach, as well as covering the key outcomes. May be a minor issue with the content, or with structure, cohesion, or language.	3 pts Executive summary explains the background, problem addressed and approach, as well as covering the key outcomes. May be several minor issues with the content, or with structure, cohesion or language.	2.5 pts Executive summary explains the background, problem addressed and approach, as well as covering the key outcomes. May have significant issues with the content, or with structure, cohesion or language.	<2.5 pts Either no executive summary provided, or executive summary does not explain the background or problem addressed. Significant issues with the content, or with structure, cohesion or language.	/5

Introduction and Conclusion (5%) Should provide an overview of the project. Includes the project aim in the context of the technical background. Conclusion should summarise the report in terms of its goals and projected milestones.	5 pts Clearly summarises the background of the project and outlines the purpose of the report. Presents a clear overview of the team and its goals and projected milestones	4 pts Summarises the background of the project and outlines the purpose of the report. Presents an overview of the team and its goals and projected milestones. May be a minor issue with the content, or with structure, cohesion, or language.	3 pts Fails to concisely summarise the project background or outline the purpose of the report. Too long or too brief to accurately capture the contents of the report.	2.5 pts Fails to concisely summarise the project background or outline the purpose of the report. Too long or too brief to accurately capture the contents of the report. May be significant issues with the content, or with structure, cohesion or language.	<2.5 pts Either no introduction and/or conclusion provided or introduction and/or conclusion is to a very poor quality. Does not summarise the project background or the purpose of the report. Significant issues with the content, or with structure, cohesion or language.	
/5						/5

Design overview (20%) A conceptual design, Brief overview of the rocket, its planned subsystems, and functions	19-20 pts Matured rocket design that captures the critical elements of a rocket and provides sufficient detail for the selection of a suitable rocket motor. Satisfactory motor selection. Appropriate recovery method selection with safe proposed descent rates. Brief but informative overview of your payload and its intended purpose. Concise but informative overview of your current avionics' details provided. System complies with TRA and CASA regulations and competition requirements.	17-18 pts Adequate rocket design that captures most elements of a rocket and provides enough detail for the selection of a suitable motor. Will need extra work to achieve a model suitable for detailed design. Satisfactory motor selection. Adequate recovery method selection which may be lacking in the required detail or could result in inappropriate descent rates. Brief overview of your payload. Overview of avionics details provided. System complies with TRA and CASA regulations and competition requirements.	11-15 pts Rocket design is incomplete or is not flight worthy. Model needs significant work before deemed suitable. Unsatisfactory motor selection criteria and selected motor. Little to no payload overview. Little to no overview of avionics provided. Aspects of the design fails to comply with the TRA and CASA regulations and competition requirements.	6-10 pts Insufficient to no detail of rocket systems for their intended functions provided. System does not comply with TRA and CASA regulations or competition requirements.	<5 pts Little to no overview Provided. Provided overview does not capture any rocket systems or the intended functions. System clearly violates TRA and CASA regulations and competition requirements.	/20

Systems Engineering and Design Methodology (30%) Systems engineering process, which includes problem definition and system requirements. Overview of design methodology and process to discuss how your team will tackle the engineering project.	14-15 pts Rules and Regulations used as the starting point, then definition is clearly explained, including stakeholders. Clear evidence of the "so what" derived from this analysis. System requirements are identified that convincingly capture the distillation of the problem, providing a set that can be designed to, and can guide the verification of a successful system solution.	12-13 pts Rules and Regulations used as the starting point, then definition is clearly explained, including stakeholders. Clear evidence of the "so what" derived from this analysis. System requirements are identified that substantially capture the distillation of the problem. These requirements are well expressed. Scope for a minor issue or two.	9-11 pts Rules and Regulations used as the starting point, then definition is explained. Evidence of the "so what" derived from this analysis. System requirements are identified that mostly capture the distillation of the problem. These requirements are capably expressed. Scope for several minor issues.	6-8 pts Rules and Regulations used as the starting point, then definition is poorly explained. Some evidence of the "so what" derived from this analysis. System requirements are identified that partially capture the distillation of the problem. These requirements are passably expressed. Scope for several significant issues.	<5 pts Missing multiple system requirements or major issues such as clearly incorrect or unjustified requirements, or major, repeated expression issues.	/15
	14-15 pts Details clearly and concisely the design process of how the design problems and challenges are addressed and validated. Details clearly how the team approaches the problem and processes / procedures to implement design decisions and changes.	12-13 pts Details the design process of how the design problems and challenges are addressed and validated. Details how the team approaches the problem and processes / procedures to implement design decisions and changes.	9-11 pts Details some of the design process of how the design problems and challenges are addressed and validated. Some details on how the team approaches the problem and processes / procedures to implement design decisions and changes.	6-8 pts Some outline of procedures and processes to address design challenges. Team demonstrates inconsistent or ineffective decisions-making procedures and processes to implement changes.	<5 pts No overview of design methodology and process provided. Design methodology provided would not assist with addressing any design challenges. No to very little justification on the decision-making procedures of implementing changes.	/15

Team management and organisation (30%)	9-10 pts	7-8 pts	5-6 pts	3 – 4 pts	< 2 pts	
Overview of team management structure and responsibilities	Concise and clear overview of team management structure, roles and their responsibilities for the project. Demonstrates fair task allocation or justifies tasks allocation for various roles.	Good overview of team management structure, roles and their responsibilities for the project. Somewhat demonstrates fair task allocation or justifies tasks allocation for various roles.	A decent overview of team management structure, roles and their responsibilities for the project. Does not demonstrate fair task allocation or justifies tasks allocation for various roles.	An overview of team management structure. Lacks detail on the responsibilities of various roles within the team. Demonstrates an uneven task allocation or inability to adequately to distribute tasks.	Little to no overview of the team management structure or responsibilities. Management structure provided is poor and demonstrates an uneven task allocation.	
Overview of communication management						/10
Overview of project budget Overview of project timeline, milestones and launch schedule.	9-10 pts Concise and clear overview of communication processes and procedures utilised to ensure efficient communication within the team. Identifies and demonstrates appropriate communication with various project stakeholders.	7-8 pts Sound overview of team communication strategies, with mention of specific processes and procedures. Identifies various project stakeholders with moderate information regarding strategies of engagement.	5-6 pts Some information detailing team communication strategies. Identifies few project stakeholders and little information regarding strategies of engagement.	3 – 4 pts Little detail regarding team communication strategies. Fails to identify key stakeholders in the project and strategies of engagement.	< 2 pts Little to no communication management overview provided. Communication strategies provided would not be suitable for the competition. No stakeholders identified	/10

Team management and organisation (30% Continued)	5 pts	4 pts	3 pts	2.5 pts	<2.5 pts	
Overview of team management structure and responsibilities	Budget is discerning in its set out and is representative of all costs relevant to the project. Contingencies are strongly justified.	Budget is considerate of largely considerate of the relevant costs - omitting only few items. Contingencies are justified with minimal inconsistencies and errors.	Budget set out has moderate errors pertaining to quantities. Budget is largely self-consistent with little to no errors. Contingencies are not well-justified	A minimal budget is set out. Clear issues and concerns are identifiable. Budget is not self-consistent. Contingencies are not considered.	No to very little information of the budget is set out. Budget is not self-consistent. Contingencies are not considered.	/5
Overview of communication management						
Overview of project budget	4- 5 pts		2-3 pts		< 2 pts	
Overview of project timeline, milestones and launch schedule.	All major competition milestones identified with a clear and well thought out plan of how and when they will be met. Reasonable project technical and management milestones are disclosed		Unreasonable timeline and milestones are disclosed. Competition milestones do not align with project timeline. Lack of detail regarding launch opportunities and system preparation		An unreasonable timeline is set out. Timeline is inconsistent with the competition milestones. Timeline does not consider contingencies.	/5
Language (5%)	5 pts	4 pts	3 pts	2.5 pts	<2.5 pts	
Formal, objective, neutral academic language Spelling and grammar Precision, rather than ambiguity Linking language	Professional, formal language used throughout, with allowance for some minor errors.	Formal language mostly used, but spoken / colloquial language still evident. Some errors identified.	Formal language mostly used, but spoken / colloquial language still evident. A significant number of errors identified.	Lots of spoken / colloquial language, spelling and grammar errors and lack of precision identified.	Very poorly written report	/5

Report Format and Presentation (5%)	5 pts	4 pts	3 pts	2.5 pts	<2.5 pts	
Professional presentation. Frontal matter (title page, executive summary, disclaimer, table of contents, lists figures and tables, glossary). Logical structure for body of report Consistent heading, table and list formatting. Clear images and diagrams. Correct captioning.	Report is well formatted and professionally presented. Frontal matter is present, and formatting is high-standard. The structure is logical and formatting for figures, tables, heading, text is high-standard throughout Images and diagrams are clear and easy to read.	Report is professionally presented, but some minor errors in formatting (e.g. tables, lists, figures, images etc.).	Report is acceptably formatted and structured. A medium to high number of formatting errors are present.	Report structure is clearly inadequate. A high number of formatting errors are present.	Very poorly presented report	/5
/100						