



Standard Operating Procedure Standard

1.0 PURPOSE

- 1.1 Provide a standard by which other Standard Operating Procedures (SOPs) MUST conform to in order to be approved.
- 1.2 Explain the general purpose and nature of SOPs, the manner in which they are approved, and the manner and degree to which they are enforced.

2.0 SCOPE

- 2.1 This SOP applies to all members of Fog City Rocketry who are involved in authoring, reviewing, approving, implementing, and updating SOPs within the organization.

3.0 RESPONSIBILITIES

- 3.1 **Executive Responsible for Enforcement:** Oskar Garcia, President.
- 3.2 All SOP authors are REQUIRED to follow this standard when drafting new SOPs.
- 3.3 The safety officer is responsible for reviewing all SOPs to ensure that they are in conformance with this standard and overall safety considerations.
- 3.4 The President of Fog City Rocketry, or their designated committee, SHALL be responsible for final approval of all SOPs.

4.0 PROCEDURE

4.1 Language

- 4.1.1 All SOPs SHALL be written in American English (e.g., write color instead of colour). Exceptions MAY be made in specific circumstances where appropriate.
 - 4.1.1.1 SOPs SHOULD be translated to ensure that personnel impacted are able to easily understand them. In the event of a conflict between different language versions of an SOP, the English version will control.

- 4.1.2 The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in any SOP SHALL be written in uppercase are to be interpreted as described in [IETF RFC 862119](#).
- 4.1.3 Care SHALL be taken so that the content of SOPs are written in full sentences with correct grammar and punctuation.
- 4.1.4 Non-gendered pronouns SHALL be used when addressing groups of people, non-specific individuals, or offices regardless of their current holder, e.g., “When someone becomes the director of a project, it SHALL be *their* responsibility to ensure it is completed.”
- 4.1.5 When addressing specific individuals by name, their desired names and pronouns SHALL be used.
- 4.1.6 Months and the titles of sections 1.0 through 8.0 SHALL be written in all caps.

4.2 Style

- 4.2.1 SOPs SHALL have a header, title, and content.
- 4.2.2 The header structure SHALL only appear on the first page (i.e., click “different first page” under header settings) and copy the structure of the header of this document. SOP authors SHOULD copy it verbatim as the base of its structure. The header SHALL include:
 - 4.2.2.1 The Fog City Rocketry logo and name.
 - 4.2.2.2 The procedure number.
 - 4.2.2.3 The SOP’s version.
 - 4.2.2.4 The SOP’s approval status (a green YES if approved, a red NO if not).
 - 4.2.2.5 The start and end effective dates of the SOP.
 - 4.2.2.6 A horizontal rule to divide the header and content.

- 4.2.3 The title of the SOP SHALL consist of no more than one line of 24-point non-bolded Calibri font. It SHALL succinctly summarize the subject of the material that is covered.
- 4.2.4 The content of SOPs SHALL be written in 12-point Calibri Regular font. Bolding and italics MAY be used for emphasis as appropriate. Lines SHALL have single and a half spacing between them, including between the title and content. The title SHALL be written in 24-point font. Section headers SHALL be in all caps and underlined. Any subsection headers SHALL consist only of the topic name and SHOULD omit a period at the end. All other sections SHALL be full sentences with periods at the end.
- 4.2.5 The content of SOPs SHALL be numbered. Section numbers begin at 1.0. Sections 1.0 through 8.0 SHALL be numbered as appear in this document. There MUST NOT be any entries 0.0 or 9.0.
- 4.2.6 Entries SHALL be indented one block for each period. (i.e., to create a subsection, press enter to create a new list item, then click tab to indent one over).
- 4.2.7 There SHALL NOT exist any extraneous whitespace in the content of an SOP. Sections SHALL be separated by only one newline.
- 4.2.8 Page numbers shall be included in all SOPs, starting from one and increasing numerically, including the first page.

4.3 Procedure Numbers

- 4.3.1 SOPs SHALL be numbered as follows: **SOP-[Category]-[Last two digits of year]-[Number within category]**
- 4.3.2 The category numbers SHALL include:

100	Safety
200	Design
300	Construction
400	Launch Operations
500	Training and Membership

600	Administrative Procedures
700	Outreach and Public Relations
900	Miscellaneous (Any non-meta-SOP not covered by the above)
999	Meta (SOPs that set rules for SOPs)

4.3.3 The last series of digits SHALL be the sequential number of the category and year. There SHALL be no fewer than 3 digits. Leading zeroes SHALL be added as needed.

For example, this SOP is a meta-SOP, so it gets category 999. It was approved in 2023, so the year digit is 23. Since this is the first 999-category SOP approved in 2023, its sequential number is 001. Hence, SOP-999-23-001.

4.4 Procedure Versioning

4.4.1 All SOPs SHALL be versioned according to semantic versioning practices, where numbers are formed as MAJOR.MINOR.PATCH. Each element MUST increment numerically (for instance, 1.10.0 comes after 1.9.0, which comes after 1.8.0) and MUST NOT include any leading zeros.

4.4.2 Major version zero is for provisional SOPs only. They MAY change at any time and personnel affected SHOULD be prepared for frequent changes.

4.4.3 Each element SHALL be a member of the set of positive integers only, including zero. Neither the letter “v” (e.g., “v1.0.0”) nor any other symbol SHALL precede any element.

4.4.4 The major, minor, and patch versions are defined as follows:

4.4.4.1 MAJOR: The major number MUST be incremented if a revision is made to an SOP such that it results in a substantial shift to the implementation process. This could involve modifications that affect the core steps, purpose, or underlying principles of the SOP. Major changes typically necessitate retraining or significant effort to adapt to the updated procedure.

4.4.4.2 MINOR: The minor number MUST be incremented if a revision is made to an SOP that introduces notable modifications to the implementation without fundamentally altering its core principles. These changes MAY affect specific steps, add new optional steps, or introduce alternative methods within the existing framework. Minor changes generally require some training or adjustment, but they do not necessitate a complete relearning of the procedure.

4.4.4.3 PATCH: The patch version MUST be incremented if a revision is made to an SOP that solely addresses non-substantive aspects, such as spelling errors, grammar improvements, formatting adjustments, or rephrasing for clarity. These changes do not impact the procedure's implementation or alter its underlying principles. Patch changes typically do not require additional training or significant adjustment from the personnel responsible for implementing the SOP.

4.5 Review and Approval of SOPs

4.5.1 All proposed SOPs SHALL first be reviewed by the team safety officer. They MUST NOT approve any projects that do not meet safety standards as described in section 5.0 SAFETY.

4.5.2 Once a proposed SOP has been approved by the safety officer, it SHALL go to the president for review. The president MAY, in their discretion, delegate this responsibility to an individual or group responsible for approving SOPs. SOPs that do not rigorously meet the standards set forth in this policy SHOULD be rejected. Exceptions SHALL be kept to a minimum.

4.6 Effective Dates

4.6.1 SOPs SHALL be effective for no longer than one calendar year. They SHOULD be reviewed and renewed as appropriate.

4.7 Sections

- 4.7.1 In section 1.0 PURPOSE, SOPs SHALL succinctly explain the purpose and necessity of the proposed policy.
- 4.7.2 In section 2.0 SCOPE, SOPs SHALL succinctly explain the personnel the policy applies to.
- 4.7.3 In Section 3.0: RESPONSIBILITIES, SOPs SHALL designate an **Executive Responsible for Enforcement**, the person who is ultimately responsible for ensuring personnel comply with the SOP. This SHALL be an officeholder of Fog City Rocketry and/or the director of a given project. In addition, the section shall clearly designate the responsibilities of each group of personnel responsible for implementing the policy.
- 4.7.4 In Section 4.0: PROCEDURE, SOPs SHALL explain the proposed policy in as specific and granular terms as possible.
- 4.7.5 Section 5.0: SAFETY SHALL be written as explained in section 5.0 of this document.
- 4.7.6 Section 6.0: REFERENCES AND RESOURCES SHALL consist of citations and resources as described in section 4.8.
- 4.7.7 Section 7.0: REVIEW AND APPROVAL SHALL keep a log of the major approval steps of the policy, including when and by whom it was drafted, approved, made effective, and revised. SOP authors SHOULD copy the table from section 7.0 of this document.
- 4.7.8 Revisions SHALL be documented in section 8.0 REVISIONS. A new subsection SHALL be added for each revision. SOP authors SHOULD copy the table from section 8.0 of this document.

4.8 References and Academic Honesty

- 4.8.1 SFSU and CSU Academic Honesty standards SHALL be followed in all SOPs. Any quotes that are not the author's original words SHALL be given proper citation in Section 6.0 REFERENCES AND RESOURCES.

4.8.1.1 A citation SHALL appear as follows:

Author, "Title," Web URL¹

4.8.1.2 Care SHALL be taken to ensure that web URLs are accurate and kept up to date. Internet Archive URLs SHOULD be used as appropriate to prevent link rot.

4.8.1.3 An optional subsection MAY be attached to a reference or resource to give more context or guidance.

4.9 Publication of SOPs

4.9.1 At a minimum, the president or their designated committee SHALL ensure that a binder is kept with physical printouts of all SOPs. In addition, docx and PDF versions of all SOPs SHALL be made available online to all team members.

4.9.2 Certain SOPs MAY remain confidential to keep intellectual property private. This confidentiality MUST be approved by the president or their designated committee. Any SOPs under confidential status will clearly label who is authorized to read them. In addition, the senior leadership of Fog City Rocketry will be availed of all SOPs regardless of confidentiality.

4.9.2.1 SOPs under confidential status SHALL only contain what is necessary to keep private. The president or their designated committee SHALL NOT grant confidential status to non-proprietary material.

4.9.2.2 Members or officers who distribute confidential SOPs to non-team members without the consent of the president MAY be subject to disciplinary action, up to and including dismissal from the team, as deemed appropriate by senior leadership.

4.9.3 Any SOPs not under confidential status SHALL be made available publicly to all Fog City Rocketry personnel.

¹ For printed materials, an ISBN or DOI number may be substituted for the web URL as appropriate.

5.0 SAFETY

5.1 All SOPs SHALL clearly define in this section the safety hazards involved and steps to eliminate or mitigate them. They SHALL also define what the appropriate response is in the event of an incident.

5.2 All SOPs SHALL comply with local, state, and federal regulations, as well as the policies of SFSU and the California State University.

5.2.1 In the event of a conflict between any SOP and any of the above, the above SHALL control.

6.0 REFERENCES AND RESOURCES

6.1 Internet Engineering Task Force, "RFC 2119 Key words for use in RFCs to Indicate Requirement Levels," <https://datatracker.ietf.org/doc/html/rfc2119>

7.0 REVIEW AND APPROVAL

<u>Step</u>	<u>Date</u>	<u>Done/Approved By</u>
Drafted	MAY 27, 2023	Ethan Hanlon, CAO/Interim Director of Safety
Approved by Safety Officer	MAY 31, 2023	Ethan Hanlon, CAO/Interim Director of Safety
Approved by President/Committee	MAY 31, 2023	Oskar Garcia, President
Effective	MAY 31, 2023	Oskar Garcia, President
Revised		

8.0 REVISION HISTORY

<u>Version</u>	<u>Effective Date</u>	<u>Notes</u>
1.0.0	MAY 31, 2023	Original version