



ARTSA
Documentation
Guide
2024

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Introduction

Technology Student Association (TSA) is a career-oriented organization that focuses on leadership, service, and science, technology, engineering, and math (STEM) related competitive events. As the Arkansas State Advisor (as well as a former Chapter Advisor), I have noticed that our members find the documentation portion of competitive events intimidating. This documentation guide was created by combining specifications from events as well as tips and rules to follow when creating a portfolio for events. The 2019-2020 Delaware State Officer team originally wrote this guide, but I've adapted it to best fit Arkansas, the events that we offer, and the expectations that we have.

Almost every event requires successful completion of documentation. Having a guide ensures that everything follows protocol and earns you and/or your team the maximum possible points according to the rubric. I have tried to keep our expectations for our Spring Conference as close to what the National Leadership Conference (NLC) expects, but there may be some variations between what NLC requires and what our State Conference requires. Make sure to read your rules thoroughly for each contest. If the NLC desires something different for the documentation formatting, make sure you adjust your portfolio after you compete at the State Conference.

Best of luck on your projects!

Allison B. Carter

ARTSA State Advisor

Specifications

This whole document is formatted as an example of a report with the exception of the title page. The conventions used are outlined below:

Line Spacing

- Unless otherwise specified in a competitive event's guidelines, all text should be double or 1.5 spaced with an additional space between sections.
- When using bulleted lists, the same spacing rules from above apply.
- If you indent your paragraphs, you do not have to put space between them or between the first paragraph and the heading.
- If you do not indent your paragraphs (like in this guide), then the convention is to put space between them and between the first line and the heading.

Margins

- Do not alter margins unless stated in the competitive event guidelines.
- The standard margin size is 1" (one inch).

Page Numbers

- Include page numbers. This will help judges easily find information in your documentation.
- Page numbers should be in the same font size and style as used throughout the documentation.
- Page numbers should be 0.5" from the bottom of the page at the right margin starting on page 2. The title page is excluded from page numbering.

Font Type/Size

- Use a professional font that is clear to read and understand. Typically use a font within the sizes of 11-12 pt. Sometimes a smaller font is acceptable but never smaller than 10.

- The TSA typography system consists of two main type families: Source Sans Pro and Proxima Nova.
- While the Source Sans typeface works well as body copy in almost all applications, the Proxima Nova typeface is recommended for accents such as heads, subheads, and figures in charts.
- Source Sans is a free font from Google that you can download here:
<https://fonts.google.com/specimen/Source+Sans+3>
- Proxima Nova is a free Typekit font available with a working license of Adobe Creative Cloud: typekit.com/fonts/proxima-nova
- In cases such as Microsoft Applications, where Source Sans Pro or Proxima Nova is unavailable, Franklin Gothic may be used as a substitute.
- You do not have to use these fonts, but whatever you choose, keep formatting consistent throughout the documentation.

Headings

- Technical documents have sections and subsections to organize information. Give each section or subsection a brief, informative heading.
- Use a modest emphasis technique (underlining, italics, bolding or slightly larger font size) to help the reader locate the section.

Conventions for Using Numbers

- Use numeric figures (a.k.a. arabic numerals) for all quantifiable units of measure, no matter how small, be they nanometers or light-years.
- Use a numeral when you abbreviate the measure. (Ex. 2m, 0.3 cm, 1.4 in).
- If two units of measure come together in a sentence, spell out one and use numerals for the other. (Ex. “Ten 4 cm sections of pipe” were cut.)
- When using numerals, set decimal fractions of less than 1.0 with an initial zero (Ex. 0.05 cm).
- Don’t begin a sentence with a numeral. You can either spell it out or revise the sentence.
- Use consistent systems of measurements. Describe it in either inches or centimeters, but not both.

Acronyms

- Acronyms should be spelled out the first time they are used with the acronym included in parentheses that follow. (e.g. The Trade Analysis and Requirements Review (TARR) is scheduled for...)
- Some acronyms are so familiar that they are practically words themselves (USA, NASA), but most need to be written out the first time, including Technology Student Association (TSA).
- Avoid beginning a sentence with an acronym.
- Reduce the number of acronyms when possible.

Equations

- Equations should be labeled at the right side of the page and centered on the page. For example, Equation 1 shows that given drag coefficient C_D , air density ρ_∞ , planform area S , and airspeed V , drag D can be computed using

$$D = \frac{1}{2}\rho_\infty S C_D V^2 \quad (\text{Eq. 1})$$

- Hint: use a 3x1 table with white borders. Center justify the middle cell (the equation itself) and left justify the last cell (the equation number).
- Equations can either be punctuated or not punctuated. The example above is unpunctuated. You could punctuate it by adding a period at the end of the equation because the equation is the end of the sentence. You can also use commas if it's in the middle of a sentence.

Grammar, Punctuation, Spelling, Style, and Tone

- You must use correct, complete sentences, proper punctuation, appropriate usage, and correct spelling. There is no reason to not have had your draft edited by a peer, mentor, or teacher.
- The use of first person (e.g. "I," "me") is not common in technical papers and oral presentations. It is also not common to make the reader a participant (e.g. "You can see that this project would be...")

- Sometimes, however, it *is* acceptable and advisable to use the word “we” in order to write a sentence that is more clear and concise. The rule of thumb is clarity over convention, but use “we” sparingly.
- Humor, irony, sarcasm, and wit are not acceptable in technical writing.

Portfolio Type

Although portfolios are submitted online before the conference, you will still need to bring a printed copy to both the State and National Conference. Printers will not be available for student use at the ARTSA State Conference.

- Your portfolio should be placed inside a clear front report cover (e.g. <https://tsastore.mybrightsites.com/products/reportcover> or https://www.staples.com/oxford-clear-front-report-cover-letter-size-dark-blue-oxf55838/product_898710)
- Use of page protectors is recommended in order to ensure that the pages don’t get damaged.

Sections of Documentation

Title Page

Every portfolio should have a title page; this should be the FIRST page of the portfolio. This will help make sure your project is placed in the right area to be judged and to aid the judges when they are evaluating your event. The page should be blank except for:

- The event title as written in the Competitive Events Guide
- The TSA Logo or an image specific to your event (optional)
- The conference city and state (this will need to be changed if the project progresses from the state conference to the national conference)
- The year
- Participant ID number for individual events OR Team ID number for team events. Your Participant ID and your Team ID are specific to each conference and are unknown until your advisor registers you for said conference.
- Do not use any names at all, including the name of your school.

Table of Contents

Most documentation notebooks will require a Table of Contents. Here are the specifications for the Table of Contents:

- The Table of Contents can be as many pages as needed.
- The items in the Table of Contents should include all the pages required in the event's guidelines in the same order as they are listed.
- The items in the Table of Contents should start with the first page of content specified in the guidebook. It should NOT start with the title or table of contents.
- The names of the items in the Table of Contents should be aligned to the left.
- Google Docs (and Word) will [make a table of contents for you](#).

Work Log

Most events require a [Work Log](#) which contains information on who contributed what in your event.

Here are some specifications for the Plan of Work log:

Use the document provided in the national rulebook for the Plan of Work Log.

- Only use initials; no names.
- Be specific when writing the amount of time required to accomplish a task and the nature of the work.
 - Example of a good entry: "JS will test the prototype by running stress and strain simulations in Inventor."
 - Example of a bad entry: "Justin will do the stuff in Inventor."

Graphics

Graphics are either tables or figures. Tables are columns and rows. All other graphics are figures (photo, sketch, graph, chart, etc.).

- Graphics are always labeled with a number and an informative title. Figures are labeled on the bottom. Tables are labeled at the top.
- If you borrow a graphic from another source, indicate that in small print in the title.

Graphics and Text

- When you use a figure or table, place the graphic after the paragraph in which you refer to it in the text.
- In the text, refer to the graphic, give the number, and explain briefly what it is. (A reader counts on the writer to interpret the data in the graphic.)
- Size the graphic to fit the text. Don't worry about wasting space, but note that most graphics can be reduced in size to less than a page without impairing readability. However, full page graphics are acceptable if really needed.
- Multi-page or very large graphics and unrefined data sets should be placed in the appendices to allow readers to access that information without interrupting the flow of your narrative.
- Use color with intentionality. In technical graphics, color indicates information, not decoration. If a color doesn't provide extra information, don't use a color.

Tables

Tables are useful in showing data and you should use them where appropriate. However, unless they are formatted neatly and consistently, the data becomes lost or unusable. Here are the formatting guidelines for tables:

- Label each table with an informative title at the top of the graphic.
- Use bold type for titles and column headings.
- Column headings should be centered over each column.
- Tables using one- and two-line column headings should be aligned at the center of the cell.
- Unless specifically required by your event's guidelines, gridlines should be used.
- All columns containing text should be aligned to the left with an exception to column headings.
- All columns containing numbers should be aligned to the right.
- The body of the table should be single-spaced.

Summaries and Purpose

Many events require individuals or teams to summarize their projects, why they created their project, or how they produced it. Some events also require you to list your inspiration and/or reason for designing your project the way you did.

- Make sure that your summary and purpose sections are detailed. If the judges find it lacking detail, you may have points deducted. Plan to justify everything: materials, colors, shapes, sizes, textures, methods, etc.
- If you ever need help determining what you need in your summary/purpose section, you can refer to the rubric in the events guide.

Citation Styles

Citation styles are the way in which the writer acknowledges the intellectual work of others within the text itself. TSA does not provide guidance on which style to use other than “citations... must follow a professional citation style of the competitors choosing unless the competitive event specifies a specific formatting style... Some examples of professional citation styles include MLA, APA, Chicago, and IEEE.” It does not matter which one you choose, but be consistent.

References

A list of references at the end of the document are organized differently according to the citation style chosen.

- List of references is included so that a reader can look up and read the same sources you used in your documentation.
- Use a citation generator
- Be consistent with the style you’ve chosen.

Appendices

- Placed at the end of the document.
- Contain material that the reader may find useful, but isn’t necessary for understanding.

- Examples of content placed in appendices:
 - Unrefined data
 - Human subjects permission forms (with PII removed)
 - Materials lists
 - Full-size drawings or other large graphics
 - Detailed calculations
 - Sample interviews and/or resumes
- Divided into logical categories of information and labeled “Appendix A,” “Appendix B,” etc. and listed in the Table of Contents.

Others

There are many events that have specific requirements that aren’t covered in this documentation guide. For these events, make sure to refer to the event guide for specifications.

Some of these events include:

- Digital Video Production (Scripts)
- Promotional Design (Graphical Designs)
- Career Preparation (Resume + Cover Letter)

Not all of the events that have extra requirements were listed above. Check your event’s specific guidelines to be sure. If guidance about format isn’t given, use your best judgment and keep it professional and consistent. Don’t be afraid to use lots of paper. It’s better for your documentation to be understandable than eco-friendly.

Conclusion

In general, the easier it is for your judges to read your work, the more likely you are to get a good score. Use this document as a checklist after you’ve completed your documentation. Pick two or three bullet points and read your paper backwards from the last sentence to the first to make sure you’ve adhered to all the rules.

References

Craig, Jennifer L. "Style Guide for 16.401." Massachusetts Institute of Technology, Department of Aeronautics and Astronautics , courses.csail.mit.edu/6.141/spring2015/pub/resources/Styleguide16.401-v2.pdf. Accessed 6 Dec. 2023.

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