Technical Writing for Engineering and Science

MEMOS

Layout	- Font: Times New Roman or Verdana; 10 point font 1 – 1.5 line spacing 1 page limit - Headings in bold
Letterhead	- Use proper names - Clear subject line
Introduction	3 – 4 sentences - What is the purpose of memo?
Results	- Tables and graphs (limit to 2), properly captioned - Paste side-by-side
Discussion	- How was data obtained? - Significance of results (refer to illustrations) - Justifications and explanations
References	APA style

EMAIL ETIQUETTE

Letterhead	- Properly address the recipient (first and last name, job title) - Self-explanatory subject line - Sign with full name and contact information - Use your school or professional email address
Body	- Keep it brief and professional with clearly defined actions - Proofread for grammar, spelling, and punctuation
Response	- Allow a 48 -72 hour grace period - Use good judgement: if deadline approaching, resend with enquiry, or follow up by phone or in person

Reference

Stephan, E., Bowman, D., Park, W., Sill, B., Ohland, M. (2015). *Thinking Like an Engineer: An Active Learning Approach*. Upper Saddle River, NJ: Pearson.

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GENERAL GUIDELINES

Layout	• Times New Roman or Verdana • 10 -12 point font • 1.5 line spacing
Grammar	• Past tense verbs
Style	• Be clear: use efficient, precise language • Logical progression through paper • Professional tone

Material	• Define all terms, acronyms, and symbols that may be unfamiliar to reader
	• Refer to illustrations from the body of the text by number
	   o Tables: place number and caption above
	   o Figures: place number and caption below

Numbers and Symbols	• The only number that should be spelled out is a number that starts a sentence; when possible, reword a sentence so it doesn't start with a number • Keep the leading zero with a decimal • Do not spell out long numbers (135 (ok) vs one hundred and thirty five (not ok)) • Use reasonable significant figures
Proofreading	• Technical content: Double check headings, captions, references • Check for flow • Check spelling, punctuation, and grammar • Peer review

REFERENCES

Evaluating Information	• Authority: What are the author's credentials? • Bias: Is it an objective view of the subject? • Currency: When was the information created?
Evaluating Resources	• Use sources that have been reviewed by experts • Use peer-reviewed articles • Compare information with content from other sources • Corroborate information to verify facts
Formatting Style	• APA style

Reference

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SHORT REPORT

Layout	- Times New Roman or Verdana 10-12 point font 1 – 1.5 line spacing 1 inch margins
Introduction	4 – 5 sentences - What is the problem that will be addressed?
Procedure	¾ page at most - Sentences or bullets - How was data collected? How was analysis performed?
Results	- Do not discuss - Do not draw conclusions - Maximum of 3 illustrations, properly captioned
Discussion	- Explain results - Refer to illustrations - Include items from project description 1 page maximum
Summary	- What is the final conclusion? - Summarize important findings 4 – 5 sentences
References	APA style

Reference

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PRESENTATIONS

Preplanning	- WHO is the audience? - WHAT is the purpose of the presentation? - WHERE is the equipment I need? - WHEN am I on the program? - WHY am I giving this talk? - HOW LONG should I talk?
Verbal Elements	- Keep sentences short - Keep it simple - Use active voice and action verbs - Be sincere: show respect for the audience
Three Structural Parts	- Introduction (hook the audience: why is this relevant to them?) - Body: 2 or 3 main points; illustrate points with simple examples - Conclusion (summarize major points)
Making the Presentation	- Do's: - Relax - Speak slowly and clearly; make eye contact - Keep your hands by your sides - Arrive early to set up and check for problems - PRACTICE - Don'ts - Turn your back to the audience - Read from a prepared text - Shuffle or pace

Visual Aids	Slides	1 concept per slide 6 lines maximum 60 seconds of speech
	Illustrations	Use simple graphs vs lists or tables
	Material	Use bullet points vs sentences
	Text	18-24 point font - Dark against simple, light background - Printed vs cursive

Reference: Stephan, E., Bowman, D., Park, W., Sill, B., Ohland, M. (2015). *Thinking Like an Engineer: An Active Learning Approach*. Upper Saddle River, NJ: Pearson.