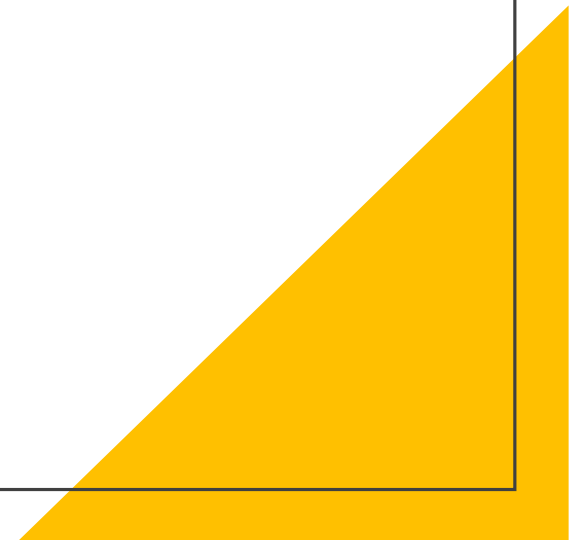# Introduction to Writing Research Papers

Presented by Nicole Curtis

Main Parts of a Manuscript

- Abstract
- Key Words
- Introduction
- Methods
- Results
- Discussion
- Conclusions
- References

Title

- Specific enough to describe the contents of your paper but not so specific only specialists will understand

- A title can describe the results or subject matter of the article

- Avoid overly long titles (10-12 words)

Abstract

- A brief, but concise summary

- Highlights from introduction, methods, results, discussion, and conclusions

- Typically one paragraph, about 100-250 words

- There shouldn't be abbreviations or citations

Key Words

- Three or four keywords that represent the main concept

- Used for indexing and searching for biomedical information

- Keywords should be taken from the Index Medicus Medical Subject Headings (MeSH)

Introduction

- Stimulate the reader's interest and provide relevant background information

- Stating your research question is most important

- References are usually only found in the introduction and discussion
  - Should be most valid and available

Methods

- Description of all methods and materials used in the study

- Should be detailed enough to verify the findings and replicate the studies

- If copying a protocol exactly from another paper, it's plausible to reference said paper

Results

- Should report the results from the experiments as well as the evidence (data) that supports these results

- Results should be presented chronologically or by most to least importance

- Save the discussion for the discussion!

Tables, Graphs, & Figures (Oh My!)

- Can be used to present the details of the results

- Provide powerful visuals, but used to complement the text

- Figures should be understood by the reader without reading the main text

- Figures should have descriptive titles, all appropriate labels, and a brief caption

Discussion

- Answers all questions from the introduction, explain how your results support the answers, and how your solutions fit in with existing knowledge

- Include interpretations, opinions, limitations, unexpected findings, the importance of the work, ideas for future research, and clinical implications

- Keep as short as possible

- Support answers with references

Conclusion

- Brief statement of main findings and implications of your study

- Not a complete summary

Acknowledgements

- Should include everyone who helped with the experiments or made any other contributions

- Funding body should be included

Choosing a Journal

- Reputable, peer reviewed

- Impact factor

- Your topic should align with the focus of the journal

- Follow guidelines or your manuscript could be rejected

Other Tips

- Be concise

- Use the active voice and first person

- Proofread with spellchecker and read through your paper multiple times

- Critiques and peer review are not a personal attack, but meant to help

- Mastering these skills will take time

- Drafts are expected to be imperfect, but make sure they're not full of simple spelling errors

- Starting with the easiest sections (methods and results, then discussion, conclusion, intro) can make it easier to get started

Directions for your Final Research Paper

THE FINAL RESEARCH PAPER

A final paper describing the research experience, the area of study, as well as any findings and recommendations for extended research is due at the end of the Program. **Since the various departments employ different techniques and formats for writing research papers/reports, faculty mentors should be consulted prior to preparing the research paper.** Mentors should provide students with guidelines regarding the proper format and form of documentation for the research paper. Mentors are required to review and approve the final paper.

The paper should be approximately **10 pages**, _excluding_ the title page, appendices and bibliography. The paper must be typed with one-inch margins on the left/right and top/bottom using a standard 10-pt. or 12-pt. font. Pages must be numbered in the upper right-hand corner. Headings such as "Introduction," "Statement of Problem," and "Review of Literature," should be consistently formatted.

The research paper must also adhere to the following format:

1. Cover Page:	Title of the Project
	Student's Name
	Name of Faculty Mentor
	Academic Department and University
	Date of Submission
2. Abstract:	See guidelines listed below
3. Text of Paper:	Introduction (including background information and purpose of research)
	Materials and Methods
	Results
	Discussion/Conclusions (including Implications for Further Research)
4. References:	References must be full bibliographic citations that adhere to the format used by your discipline.

The abstract should be a clear and concise statement of the research question, the research methodology utilized and the conclusion. All of the information requested must be typed. _Handwritten materials will not be accepted._