

ANS 399A: Animal Science Internship Experience Program

Scientific Paper Component

Each student will be expected to write a scientific paper on an issue, problem, or topic related to your internship and something of particular interest to you. The objectives are for students to:

1. Learn more about a topic they found interesting during their summer internship.
2. Learn how to write a scientific paper that includes citations from multiple refereed journal articles as well as, how to interpret and incorporate data (actual numbers) in the discussion including tables, charts, and/or figures.
3. Realize and implement the differences between scientific writing and the traditional styles used for English compositions.

A scientific paper entails introducing a topic or argument, providing data that both supports *and* refutes your argument, then using the data you provided, draw a conclusion about your topic. All data cited should come from peer reviewed journal articles from original scientific experiments. Your references should be used to introduce **DATA** to your paper that is relevant to your topic and should NOT include quotations or to introduce basic principles. Please research the difference between peer-reviewed scientific journal articles and popular press before writing your paper and use only data from peer-reviewed sources. Popular press references are NOT allowed. Also, expect for your intro paragraph describing what got you interested in the topic hand, there should be no I's or me's throughout your paper.

Paper Guidelines:

- Papers must be typed (Times New Roman, 12-point font)
- Double-spaced
- **All** margins should be no more than 1 inch.
- I anticipate that most papers would be 4-5 pages of discussion, plus the title page, corresponding figures or data tables, and a list of references (so 7-9 pages total).
- Proofread your paper. Have several peers read through it.

Your paper should include a:

- **Title Page**
 - The title page should include the title of your paper and your name.
- **Introduction**
 - Include a brief description of your internship (1 paragraph or less) and what got you interested in the topic you are researching. Continue by defining the topic for your creative component. Remember the written report is not a report about your internship experiences. Discuss the connection of this topic to your internship experience. Discuss why this topic is important to you and your internship.
- **Summary of the information you have gathered**

- What information did you find published about this topic? Describe the published information that you could locate on this topic. Identify consensus conclusions, continuing controversies or unanswered questions about this topic from your literature review. Your paper should not be simply a series of one- or two-sentence/paragraph summaries of the references used. Similar types of information from different sources should be brought together and each paragraph should reflect a single concept, rather than multiple concepts from a single reference. Also, be sure to **focus on the data from the papers you are evaluating** and be sure to **interpret and describe the data throughout your paper with numbers, p-values, etc.** Don't just say, "refer to Figure 1 or according to Figure 1". **Describe what is being portrayed in the figures and tables.** Also, the "Materials and Methods" sections of your scientific sources are important to your understanding of the data and the conclusions of the source, but should not be included in your paper unless they are relevant to the conclusions of your paper. **Failure to include relevant, peer-reviewed articles will result in a significantly lower grade.**
- **Your summary or conclusions**
 - Develop a conclusion relative to the issue, problem or topic that you have selected using the information that you have been able to gather. What are the impacts on the industry, etc.
- **List of Figures and Tables from the articles selected for paper**
 - Figures and/or tables that contain **actual data are required** and will be beneficial to your discussion and should be placed on separate pages after the end of your discussion, not imbedded within the text.
 - Figures/Tables etc. **should be properly labeled after the discussion**, ex. Table 1. Table 2. Figure 1. Figure 2. **And cited as to where you got them from (which scientific paper they came from).**
 - **Tables and Figures should also have a title and summary sentence describing what the table/figure is about.**
 - These figures/tables should be **described/interpreted** within your paper.
 - Figures does not refer to images/pictures taken from the internet and/or in person. **Figures refers to charts created through the use of data.**
 - It is highly recommended to have 2 or more Tables/Figures to refute/support claims being made.
- **Literature Cited/References**
 - Your references need to be **cited correctly within the literature** as well as at the **end of your paper.**
 - Your references should be listed in **alphabetical order** and follow the required format specified below.

You must use **at least three (3) references from scientific journals** published within the past ten (10) years (2013-2023). **No** references more than five (5) years old allowed! **Popular press articles (magazine or newspaper articles) and**

internet sources (anything requiring a URL to cite and/or course material) is not allowed and will result in 5 points being deducted for each. All references should be listed on a separate page following your tables and/or figures and **every reference should be cited in the paper at least twice.**

When citing references in the text of your paper, list the authors last names (if one or two authors) and the year of the publication, e.g. (Peters, 1996) or (Nicholas and Smith, 1983). If there are more than two authors, list the first author only followed by et al., and the year of the publication (Thomas et al., 1998). Common mistakes are not including the source in the first sentence when information from a source is mentioned.

Refer to the Journal of Animal Science Instructions to the Authors for more detailed information regarding formatting your paper (Citations in the text, JAS abbreviations, List of Figures and Tables, etc.). These can be found at:

[https://academic.oup.com/jas/pages/General Instructions](https://academic.oup.com/jas/pages/General%20Instructions)

Your list of references should be in **alphabetical order** (by last name of first author) and use the following format, paying particular attention to capitalization and punctuation:

Knights, M., T. Hoehn, P. E. Lewis, and E. K. Inskeep. 2001a. Effectiveness of intravaginal progesterone inserts and FSH for inducing synchronized estrus and increasing lambing rate in anestrus ewes. *J. Anim. Sci.* 79:1120-1131. DOI: 10.2527/2001.7951120x.

Stevenson, J. S., S. Z. El-Zarkouny, and M. M. Shaaban. 2011. Blood metabolites and hormone-based programmed breeding treatments in anovular lactating dairy cows. *J. Dairy Sci.* 94:6001-6010. DOI: <https://doi.org/10.3168/jds.2011-4429>.

Wheaton, J. E., K. M. Carlson, H. F. Windels, and L. J. Johnston. 1993. CIDR: A new progesterone-releasing intravaginal device for induction of estrus and cycle control in sheep and goats. *Anim. Reprod. Sci.* 33:127-141. DOI: [https://doi.org/10.1016/0378-4320\(93\)90111-4](https://doi.org/10.1016/0378-4320(93)90111-4).

First author's last name, first author's first and middle initials, then the first and middle initials, followed by last name of ALL remaining authors. Year the paper was published. Title of paper. Journal abbreviation of journal article was submitted to. volume: page numbers of article. Doi: (if available).

Pay particular attention to your references – both how they are cited within the text of your paper as well as how they are cited in your list of references.

Do **NOT** use quotes. Read the material, then rephrase the material using your own words.

All papers will be checked for plagiarism using the software available in Canvas.

Plagiarism falls under the ISU Academic Dishonesty policy and will result in an automatic zero grade for the paper. Cutting and pasting **any** material from a reference article or any other source of information is considered plagiarism and is reportable to the Dean of Student's Office.

A great resource you may consider utilizing while writing your paper is the Writing and Media Center.

<https://www.wmc.dso.iastate.edu/>

Also, please consider running your paper through Grammarly (you can sign up for a free account) prior to turning your paper in to assist you in identifying common grammar mistakes and errors.

In case you are unfamiliar with Grammarly: *'Grammarly is a digital writing tool that provides grammar and spell checking, plagiarism detection services, and suggestions about writing clarity, concision, vocabulary, style, and tone.'*

<https://www.grammarly.com/>

Lastly, do not think that you will be able to complete a high-quality paper in one or two evenings. Students can do great in this class up until the paper and if a poorly written paper is submitted, students can drop 1-2 letter grades. So, please be sure you put in a sufficient amount of time in order to do well on your paper. Please be sure that you read and follow all directions carefully and please reference the Scientific Paper Grading Rubric that outlines the criteria you will be graded on and the associated point values.