THESIS WRITING AND COMMUNICATION IN GENETICS 01:447:414
FALL SEMESTER 2023

COURSE SYLLABUS
August 7, 2023 (subject to revision)

Course number:	01:447:414 (1.5 cr), Index 08420. Special permission.
Location:	Nelson Biolabs, A-237
Meeting times:	Tuesdays 3:50 PM - 5:10 PM
Canvas site:	https://canvas.rutgers.edu (Course management system)
Instructor:	David Axelrod PhD, Department of Genetics, Rutgers University
	Email: axelrod@biology.rutgers.edu
	Office hours (drop in): Wednesdays, 1:30-2:30 PM

Course Description: Communication is an essential part of science. Whether it is communicating research findings to other scientists or conveying complex concepts to a lay audience, a scientist must have effective communication skills in order to succeed. Communication in science is typically through publications, posters, or oral presentations. The goal of this course is to provide students with guidance and practice in effectively communicating scientific findings, with particular emphasis on the writing parts of their Honors thesis and explaining their research orally.

Course Goals: Students are expected to:
- Write part of an Honors Thesis in the style appropriate for publication in a journal in the field of genetics, or in the style of a research proposal appropriate for submission to a funding agency. Such articles typically include at least the following: Title, Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, and References. The Results, Discussion, and Acknowledgements sections will not be part of the Final Report for this Fall semester course, however they will be the subject of the second semester course and the complete Thesis.
- Find relevant research articles and reviews in the published literature. Use online databases such as Medline/PubMed for backward searches, and Web of Science Cited Reference Search for forward search. Use the articles as the basis for writing the Introduction.
- Make an oral report of your work in the format of an interview, similar to an interview as part of an application to medical school, graduate school, or for a job in academia, industry, or government.

SAS Core Learning Goals Satisfied by the 447:414-415 combination:
> WCr- Respond effectively to editorial feedback from peers, instructors, and/or supervisors through successive drafts and revision
> WCd- Communicate effectively in modes appropriate to a discipline or area of inquiry.

Departmental Learning Goals:
- Use genetic information and ideas to critically analyze published research articles in genetics
- Design, conduct, analyze, and interpret experiments using appropriate laboratory techniques
- Effectively incorporate critiques from peers and faculty in their revision of written and oral communication
- Effectively describe their research, using relevant discipline-specific terminology with precision, accuracy & purpose
- Accurately and effectively present advanced scientific concepts through oral presentations.

Optional Reference Books:

Writing in the Biological Sciences: A Comprehensive Resource for Scientific Communication, 4nd edition. Angelika H. Hofmann, Oxford University Press, Oxford University Press, 2022; ISBN: 9780197543580. Available at Library of Sci. and Medicine. QH304.H64 2022

The Elements of Style, 4th edition, Strunk, W., ProQuest EBook Central, 2020. Full text available online at https://www.libraries.rutgers.edu

Course Purpose: This is the first of two one-semester courses titled *Thesis Writing and Communication in Genetics.* By the end of this Fall semester students will have written a Thesis Draft. This draft will contain several parts of their Honors Thesis, including the following: Title Page, Table of Contents, Abstract, Introduction, Materials and Methods, Bibliography of references, Figures and Tables, and Appendix (Glossary, etc.). During the second semester, students will complete their Honors Thesis by revising previous sections, and include the Results and Discussion sections. The entire thesis will go through multiple drafts, with edits from the Instructors.

Course Expectations: This is a course in effective communication in the area of genetics. It includes multiple written assignments and an oral presentation. This course is not a repeat of the English Department's Expository Writing course. A major part of the thesis is an Introduction section. It will include a critical summary of relevant published research articles, and will use that summary to provide a persuasive argument that the student's proposed work is feasible, novel and important. Other items for the thesis are listed separately. Students are expected to attend and participate in every class. Students will be responsible for material presented in class, and any instructions or Syllabus revisions announced in class and/or sent to the students by email or posted on CANVAS.

Students' Expectations: Students will (1) read published research articles and review articles in order to provide a basis for parts of their Introduction; (2) write an Introduction appropriate for a Research Proposal, a Materials & Methods section modeled after such sections in research articles, and other sections; (3) respond to critiques of their written work; and (4) revise what they have written in response to the Instructor's critiques. Each week's task should be completed as described in the Assignments section. Students are expected to attend and participate in each class, and to submit correctly formatted Assignments to CANVAS before the due date and time.

Instructor's Expectations: The Instructor will not teach how to write with correct English grammar. Rather, the instructor will discuss published scientific articles as examples, will help to organize the content related to the student's Thesis, will provide written critiques, and will provide the opportunity to revise material for each portion of the draft. The Instructor will also demonstrate how to prepare for oral presentations in the form of interviews that would be part of an application for medical school, graduate school, or for a job.

Format: During each class, the Instructor will give a lecture, ask questions, and lead a discussion of the assigned topic. The lectures will be in person. The PowerPoint slides for the lecture will be available before the lecture on CANVAS. Office hours for students discussion with the Instructor will be held on Wednesdays 1:30 – 2:30 PM, drop-in, no appointment required.

Canvas site: http://canvas.rutgers.edu. Canvas is the Learning Management System (LMS). Sign in with your NETID and password, select the "Courses" tab on the left, then select from the list of Published courses "2023FA – THESIS WRITCOMM 01:447:414 Fall 2023". Notice the tabs for Files, Assignments, and Modules. Select "Modules". The title of each Module has a week number. Within each Module are a list of files appropriate for that Module, such as Syllabus, Lecture, Rubric, etc. Select the title each of these files for further information and instructions.

Technical help is available from the Office of Information Technology by phone at 833-OIT-HELP ((833-648-4357), or at https://it.rutgers.edu/help-support A student guide to Canvas is available at: https://canvas.rutgers.edu/students/getting-started-in-canvas-students/

Academic Integrity Policy:
https://policies.rutgers.edu/10213-currentpdf
Accessed July 27, 2023
       Honor Pledge: To create a strong culture that promotes academic integrity, Rutgers has adopted the following honor pledge to be written and signed on examinations and major course assignments submitted for grading: ***On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment.*** Participating in this class, including submission of Assignments, will be the equivalent to writing and signing the Honor Pledge.
       Cheating: The use or possession of inappropriate or prohibited materials, information, sources, or aids in any academic exercise. Cheating also includes submitting papers, research results or reports, analyses, and other textual or visual material and media as one's own work when others prepared them.
       Academic Penalties: Any violation of academic integrity is a serious offense subject to appropriate sanctions or penalties. Violations of academic integrity may result in academic penalties, educational sanctions, and/or disciplinary sanctions… including but not limited to the following, a grade of F in the course, suspension for one or more semesters, expulsion from the University with a permanent notation of disciplinary expulsion on the student's transcript.

Grades: Grades will be based on student performance on homework Assignments. Percent contribution of each Assignment towards the final course grade are indicted on the Schedule of Classes and Assignments. Grades will be calculated based on overall course performance. The following grading scale will be used: 90% A, 85% B+, 75% B, 70% C+, 60% C. The Instructor reserves the right to modify the grading scale downward (e.g., making the lowest A an 88%), but will not adjust the grading scale upward. Grades below "C" will be determined based on the final score distribution at the end of the course. Points will be taken off for not following instructions or not meeting deadlines!

Penalties for Late and Mis-formatted Assignments: Assignment deadlines are clearly indicated on the description of Assignments, and on the Schedule of Classes and Assignments. Each Assignment is due before the beginning of the class (3:50 PM). Late assignments will be penalized 10% of the total grade for that assignment on the first day it is late, and another 10% for each additional 24-hour period past the deadline. Even one minute late counts as late! Don't wait until the last minute to submit an assignment. Internet connectivity problems or problems with CANVAS will not be accepted as an excuse! It is each student's responsibility to confirm that each assignment has been successfully submitted.
       Formatting is an important component of publications, presentations, and theses. Students will lose points for failing to adhere to formatting guidelines. It is not unreasonable for an assignment to suffer a 10-20% penalty due to errors in formatting or failure to follow instructions.

Student Support and Wellness Services:
- Disability accommodations: Students in need of disability accommodations should register with and consult the policies and procedures of the Office of Disability Services website: https://ods.rutgers.edu
- Assistance or support regarding personal or academic challenges:
  - Dean of Students, Tel: 848-932-2300, Email: deanofstudents@echo.rutgers.edu

- Student Success Essentials: https://success.rutgers.edu

- Student Support Services: https://www.rutgers.edu/academics/student-support
- The Learning Centers: https://rlc.rutgers.edu/
- Rutgers Libraries: https://www.libraries.rutgers.edu/
- Bias Incident Reporting: https://studentaffairs.rutgers.edu/bias-incident-reporting
- Office of Veteran and Military Programs and Services: https://veterans.rutgers.edu
- Student Health Services: http://health.rutgers.edu/
- Counseling, Alcohol and Other Drug Assistance Program & Psychiatric Services (CAPS): http://health.rutgers.edu/medical-counseling-services/counseling/
- Office for Violence Prevention and Victim Assistance: www.vpva.rutgers.edu/

Guidelines:

A Note About Thesis Guidelines: The format of the thesis drafts submitted for this course should follow the "Thesis Guidelines" provided in the Files section of the course Canvas site. These are the same as the Thesis Guidelines that appear in the Genetics Major's Student Handbook. A MS- Word docx file has been provided that has the appropriate style and formatting that students may use as a starting template.

Final Thesis Guidelines, Spring semester, from the Genetics Major's Student Handbook
- Title Page
- Acknowledgements Page (optional)
- Table of Contents
- Abstract (limited to 1 page)
- Introduction, typically 15-20 pages, broken into sections with subheadings)
- Materials and Methods (5-10 pages)
- Results (10-20 pages)
- Discussion (5-10 pages)
- Appendix (optional, could be anywhere from 1-20 pages)
- References (typically 5-15 pages, perhaps 50-100 references, with the majority being primary references. i.e., not reviews)

Thesis Draft Guidelines, Fall semester in Bold. Notice changes * from above. Details on next page.
- **Title Page**
- Acknowledgements Page (optional)
- **Table of Contents**
- **Abstract (limited to 1 page)**
- **Introduction (minimum of 10 * pages, broken into sections with subheadings)**
- **Materials and Methods (* as appropriate)**
- Results (10-20 pages)
- Discussion (5-10 pages)
- **Appendix (Glossary, Lab protocols, additional optional material,**
- **could be anywhere from 1-20 pages)**
- **References (minimum of 25 *, with the majority being research articles, not reviews)**

During the Fall semester. The student's Research Mentor may request a different format for a different end-of-semester report submitted to the Research Mentor for the course 447:408; however, the Thesis Draft submitted for this course Thesis Writing 447:414 must adhere to the guidelines for this course.

During the Spring semester. For Thesis Writing 447:415, students should follow the instructions of the Instructor for that course. Students will write the Results and Discussion Sections of their Thesis based upon their research. Students should also revise the Thesis Draft that was submitted during the Fall semester, and add the Results and Discussion sections to make a complete Final Thesis.

Sections of Assembled Thesis Draft, Fall Semester:
1. Title Page
　　Format in Guidelines in the Genetics Majors Student Handbook
2. Table of Contents
　　Format in Guidelines in the Genetics Majors Student Handbook
3. Abstract, limit one page, with subsections
　　3.1 Background
　　3.2 Hypothesis or Questions
　　3.3 Objective
　　3.4 Methods
　　3.5 Possible results
　　3.6 Significance
4. Introduction, minimum 10 pages of text with subsections:
　　4.1 Critical review of published research literature in an area of interest to you
　　　　being carried out by your Research Mentor,
　　4.2 Identification of open questions,
　　4.3 Specific Aims. List of 1 to 4 goals that you intend to accomplish, and for each:
　　　　4.3.1 What question you intend to answer or hypothesis intend to test
　　　　4.3.2 What is the rationale or motivation
　　　　4.3.3 What information you intend to obtain
　　　　4.3.4 How you will accomplish that Specific Aims
　　4.4 Development of an argument that your proposed research is
　　　　4.4.1 Significant
　　　　4.4.2 Innovative
　　　　4.4.3 Feasible
5. Materials and Methods
　　Subsections for each Specific Aim
6. Bibliography (=References)
　　Minimum of 25, formatted for an indicated journal, and example from the indicated journal. Includes all Authors' last names and initials, article title, journal name or abbreviation, volume number, first and last pages. Some journals also require the following: issue number, URL, doi, and/or PMCID.
7. Appendix
　　Glossary of terms
　　Lab protocols
　　Supplementary material (Optional)
8. Figures with legends, and Tables with titles and footnotes, each on a separate page.

Format of Assignments:
　　From the Guidelines for the Undergraduate Genetics Major Written Honors Thesis:
Application: MS-Word. Font: 11-point Ariel. Spacing: double-spaced (expect for figure legends, which may be single spaced). Margins: 1-inch all around. Page numbers: Arabic numerals, centered, 1/2 from bottom of the page.
　　Each Figure with its legend, and each Table with its footnotes should be on a separate page.

SCHEDULE OF CLASSES

Week 1, Sept 5: Introduction to the Course, Parts of the Thesis Draft

In class:

The Instructor will describe the course learning goals, expectations (completion of Thesis Draft, preparation of oral interview), and course format (lectures, relaxed discussion and interaction, student interviews).

The Instructor will review and discuss the overall organization and sections of the Thesis Draft.

The outcomes of this semester will include an Honors Thesis Draft with the following sections: Title page, Table of Contents, Abstract, Introduction, Materials and Methods, References, Appendix (Glossary, Lab protocols, and other Supplementary optional material), Figures and Tables.

In addition, there will be an Interviewee Form and an oral presentation in the form of an Interview that would be part of an application for medical school, graduate school, or for a job.

Assignments will be submitted to CANVAS in the MS-Word (docx) format.

Out of Class:

Students should review the Syllabus and "Thesis Guidelines." Read "Using Microsoft Word Styles Function" and download the three thesis template docx files.

Students should request from their Research Mentor two research articles and two review articles related to their thesis research.

Students should download from the course website and read the file "Course Expectations and Grading Guide for 01:447:408 Honors in Genetics Fall Semester". Students should forward a copy of the file to their Research Mentor at the beginning of the semester, and again one week before the end of the semester. It includes information about Expectations of the Student, instructions for the Mentor Evaluation of the Student, and Suggested Grading for the 408 course using the "Mentor Evaluation" form with "Guidelines for Student Assessment Using Rubrics". The grading for the Thesis Writing 414 course, and grading for the Honors Research course 408 are separate.

Week 2, Sept 12: Searching the Published Literature

In class:

The instructor will demonstrate how to search for published articles relevant to their Thesis research using the Rutgers Library's Ovid interface for the Medline database of biomedical literature, and the Web of Science Cited Reference Search.

The Instructor will demonstrate how students can email to themselves from Medline the complete citation, including Author, Title, Citation, Abstract, and MeSH Subject Headings (Medical Subject Headings = key words), and other information; and how to export citations to EndNote, or other citation managers.

Out of class:

The students should write a 500-word essay summarizing the two research articles and two review articles obtained from their Research Mentor, and describing how they relate to the student's own thesis project. All four articles (pdf format) and the essay (MS-Word format) will be due as Assignment 1 submitted to Canvas before Sept. 19, 3:50 PM.

Students should use the Medline database to search the published literature for at least 25 research articles related to the research articles and review articles obtained from their Research Mentor, and to the student's research topic. The students should send emails to themselves containing the complete citations and abstracts of the articles. These will be used in future assignments for the Introduction.

Week 3, Sept 19: Managing Citations, Constructing a Bibliography of References

In class:

The Instructor will demonstrate how to install EndNote 21 citation manager tool, create an EndNote account, log in to the EndNote citation manager system, install "Cite As You Write", download citations from Medline/Ovid and Web of Science, and format citations for the Reference section (Bibliography) according to a selected journal.

Out of class:

Students should review the EndNote support documents on the course Canvas site.

Students should install EndNote 20 on their own computer. Download link and Step by step instructions link (EndNote research guide) for installation of EndNote 20 for Windows or Mac can be found at

https://www.libraries.rutgers.edu/research-tools-and-services/citation-management/endnote

Students should go to https://libguides.rutgers.edu/endnotetutorials It will take you to the EndNote Tutorials Home page. Read material on the following tabs at the left: How to Create a Library, How to import References from a Database, How to Cite While You Write (CWYW).

Useful links can also be found at the right of the same EndNote Tutorials Home Page..

Students should create an EndNote account, practice downloading citations from Medline, and practice formatting citations.

Students should use the Web of Science Cited Reference Search, to find articles that have cited the two research articles and two review articles since they were published. This will update the list of articles found on Medline that cited related articles (similar MeSH) before they were published. These articles should be added to the student's library. Building from these searches, students should compile a list of at least 25 articles that seem most cogent to their research project. No more than 10 of these may be reviews.

Students should select a journal in their field that requires complete citation information, see page 6, item #6. Use EndNote 21 to format the list of articles for the selected journal. Note that the format that EndNote 21 produces may not be correct for every article. If the format of an article is not correct, manually correct it. The Preliminary Bibliography (list of formatted articles), with the name of the selected journal, and relevant MeSH Subject Headings should be submitted to Canvas as Assignment 2 before Sept. 26, 3:50 PM.

Week 4, Sept 26: Creating an Outline, Writing a Preliminary Abstract

In class:

The Instructor will convey the importance of constructing an outline of sentences of the Introduction rather than plunging ahead and writing detailed text. It is a way of organizing your thoughts, indicating what is most important, and how your argument can be persuasive. The purpose of the outline is to provide a framework for the subsequent details. The outline will highlight that the Introduction is more than a summary, and more than a critical review of published research. The Introduction is also an argument that the proposed work is important, novel, and feasible.

The suggested topic sections of the outline might include a prolog, summary mentor's research, critical review of the published literature, and context of the student's research. It should also include open questions, specific aims, approach, and an argument the proposed research is significant, innovative, and feasibility.

The Instructor will describe and provide examples of Abstracts. The Abstract should be one-half to one page with sentences organized with each of the following subheadings: Background, Hypothesis or Questions, Objective, Methods, Possible Results, Significance.

Out of class:

Students should write the Outline and Preliminary Abstract. This Preliminary Abstract may be revised later in the course. The Outline and Preliminary Abstract should be submitted to Canvas as Assignment 3 before Oct 3, 3:50 PM.

Week 5, Oct 3: Introduction: Reading the Published Literature, Writing a Critical Review
Week 6, Oct 10: Introduction: Reading the Published Literature, Writing a Critical Review, con't

In class:

The Instructor will indicate how the critical review of the published literature can be more than paraphrases of published abstracts. It should have selected information bearing on the problem to be investigated. It should include ideas as well as methods that have been used to further a relevant field. It should inform the reader about the specific background information that the reader needs to know to understand the problem. It should indicate what aspects of previous reported observations and conclusions are reliable and what may be questionable or in need of further investigation. It should highlight avenues of research that are the immediate precursor or basis for the student's further investigation.

The Instructor will lead a discussion of several key questions about their project: Who is your audience? What do you need to tell your audience so that they understand why what you are proposing is important, novel and feasible? What questions are you trying to answer or what hypotheses do you intend to test? Why are the questions important? How will answering the questions move the field forward? What is already known? What is not known? What approaches (logic and methods) will you be using? What alternatives? Is there an advantage to your approach over that of others?

Out of class:

The students should write a summary and critical review of relevant research published in the articles compiled in Week 3, and submit them to Canvas as Assignment 4 before Oct 17, 3:50 PM.

Week 7, Oct 17: Introduction: Identifying Open Questions

In class:

The Instructor will indicate how the summary and critical review of the relevant published research can lead the framing specific questions or hypotheses. Framing specific questions or hypotheses helps the investigator to organize their ideas. The questions or hypotheses will focus the reader's attention on what the proposed work is intended to accomplish. There are several kinds of questions, some are intended to resolve an existing controversy, some to provide new information to illuminate an established field, and others to open new areas of research. Sometimes the original questions that inspired the work are revised with 20-20 hindsight and appear reformulated in publications after the research observations are collected and evaluated.

Out of class:
  The students should write several open questions and explain the rationale for them. These should be submitted to Canvas as Assignment 5 before Oct 24, 3:50 PM.

Week 8, Oct 24: Introduction: Organizing Specific Aims, What You Want to Accomplish

In class:
  The Instructor will describe how to indicate the goals of the proposed research, and how the goals will be accomplished. The goals are intentions to accomplish benchmarks. The goals are usually organized as a list of one to four Specific Aims. They are described as questions to be answered or hypotheses to be tested, not just tasks. Under each question or each hypothesis, the investigator indicates the rationale or motivation, what information is to be obtained, and how that information will be obtained, both the logic and the methods.

Out of class
  The students should list several Specific Aims as questions to be answered or hypotheses to be tested, and for each include the rationale or motivation, what information is to be obtained, and the logic and methods for obtaining that information. This should be submitted to Canvas as Assignment 6 before Oct 31, 3:50 PM.

Week 9, Oct 31: Introduction: Developing an Argument, The Proposed Work is Significant, Innovative, and Feasible

In class:
  The Instructor will describe how to conclude the Introduction with an argument that the proposal is *significant, innovative, and feasible*. The significance should be both to the specific field of research and to a broader context of public health. It should address the possible challenge that the proposed work is "Clever research, but so what?" The importance of specifying the innovation is that there may be many competing similar proposals, so it is necessary to indicate how yours in different than what others have done or can do, and that the difference will allow you to accomplish something that others cannot accomplish. You need to provide an argument that your methods and logic are possible, and not magic bullets.

Out of class:
  The students should write an argument that the proposed work is significant, innovative, and feasible. This should be submitted to Canvas as Assignment 7 before Nov 7, 3:50 PM.

Week 10, Nov 7: Identifying Materials and Methods: How You Intend to Accomplish Your Specific Aims

In class:
  The Instructor will describe the format of an informative Materials and Methods section, and provide effective examples. The purpose of this section is to provide the reader with enough information so that the reader understands what was done, and justification for decisions that were made. For methods common to the field of research, reference may be made to previously published protocols. More detailed description may be made of unique methods, or improvements in conventional methods. Development of entirely new methods that can accomplish something new may be described with examples of novel results. The Methods section should indicate analytical methods, statistical tests, and list of computer applications or pseudo-code. The Instructor will indicate the distinction between the Materials and Methods section and lab protocols. Detailed lab protocols should be collected and included in the Appendix.

Out of class:

Students should write a Materials and Methods section appropriate to their proposed research. An Appendix should include a glossary of terms and detailed lab protocols. Computer code with comments, may be included in the Appendix as appropriate. Additional material may be included. These should be submitted to Canvas as Assignment 8 before Nov 14, 3:50 PM.

Week 11, Nov 14: Presenting Data with Figures, Legends, and Tables

In class:

The Instructor will discuss tips and strategies for preparing Figures with their Legends, and Tables. The Instructor will also provide examples of how to incorporate simple statistical analysis into written text, figures, and tables.

Out of class:

Students should review the PowerPoint slides from today's class (Analyzing and Presenting Data). Students should read "Making Figures Using Powerpoint," "Scientific Presentations," and "What's in a Picture" on the Canvas site.

Students should prepare at least two Figures with their legends, and two Tables, using your own data, or devise mock data, to use as examples to demonstrate you understand what constitutes a good presentation. Each Figure with its legend, and each Table with its footnotes should be on a separate page. These should be submitted to Canvas as Assignment 9 before Nov 21, 3:50 PM.

Students should assemble all sections of their Thesis Draft that they previously wrote, review it, and revise it. In addition, students should write and include a Title Page, and Table of Contents. There should be a minimum of 10 text pages of Introduction, and a Bibliography with a minimum of 25 formatted citations. The journal used as a guide for the formatting of the citations should be indicated. The assembled Thesis Draft should include all of the following: Title Page, Table of Contents, Abstract, Introduction, Materials and Methods, Bibliography, and Appendix. MS-Word, 8.5x11 inches, 11-point Arial, double spaced 1 inch margins top, bottom, and sides. The file "Thesis Guidelines" on Canvas and the Department website has an example format for the Title Page and Table of Contents. The revised and assembled Thesis Draft should be submitted to Canvas as Assignment 10 before Nov. 28, 3:50 PM.

Week 12, Nov 28: Learning to be an Effective Interviewee

In class:

This is a course in Thesis Writing <u>and</u> Communication. Oral communication, as well as written communication is important. If you cannot effectively express your knowledge orally, then your knowledge will appear to others to be meager and unsatisfactory. As practice in orally expressing the knowledge of your research project, there will be mock interviews. The Instructor will introduce suggestions for students to prepare for an interview. Such interviews might be part of an application for medical school, graduate school, or for a job in academia, industry, or government.

Interviews provide the applicant's organization the opportunity to learn more and different information than is included in the applicant's written essay and academic transcript. Such interviews are typically on a one-on-one basis, flexible format, and subjective.

The Instructor will suggest how to prepare for the interview, how to provide information about one's self, some questions to expect, and how to respond to challenging questions.

Out of class:

Students should prepare for a 15-minute interview conducted by the Instructor by reviewing the PowerPoint slides "Preparing for an Interview" on the Canvas site, and filling out the two page

"Interviewee Form". The Form will be available to the Instructor before the interview as an introduction to the student. The student's research project, and the published literature that are the basis for the project, will be a substantial part of the interview. Students should fill out the Interviewee Form and submit it to Canvas as Assignment 11 before Dec 5, 9:00 AM.

(Note that the Interviewee Form will be due the morning before the start of the scheduled interviews to give the Interviewer time to read the Forms).

Week 13, Dec 5: Scheduled Interviews
Week 14, Dec 12: Scheduled Interviews

In class: The schedule of 15 minute Zoom interviews for each student will be posted as an Announcement in Canvas.

Out of class: The Thesis Draft with Instructor's comments will be returned in Canvas. Students should use the Instructor's comments to revise their Thesis Draft. Students should submit a final revision of their Thesis Draft to CANVAS as Assignment 12 before Tuesday Dec 19, 3:50 PM.

(Con't)

Schedule of Classes and Assignments

WEEK	DATE Tues 3:50	CLASS TOPIC	ASSIGNMENT	PERCENT GRADE
1	Sept 5, 2023	Intro Course Parts of Thesis Draft	None	-
2	Sept 12	Searching Published Literature	None	-
3	Sept 19	Managing Citations Constructing Bibliography	1. Essay: Faculty Research Articles	5%
4	Sept 26	Creating Outline Writing Preliminary Abstract	2. Formatted Preliminary Bibliography	5%
5	Oct 3	Intro: Reading Published Literature,Writing Critical Review	3. Outline and Preliminary Abstract	10%
6	Oct 10	Intro: Reading Published Literature,Writing Critical Review con't	None	-
7	Oct 17	Intro: Identifying Open Questions	4. Intro: Critical Review, Formatted Full Bibliography	10%
8	Oct 24	Intro: Organizing Specific Aims, What you want to accomplish	5. Intro: Open Questions	10%
9	Oct 31	Intro:Developing an Argument Significant, Innovative, Feasible	6. Intro: Specific Aims	10%
10	Nov 7	Materials & Methods How to accomplish Specific Aims	7. Into: Argument Significant,Innovative,Feasible	10%
11	Nov 14	Presenting Data with Figures, Legends, Tables	8. Materials & Methods, and Appendix	5%
-	Nov 21	No class. Thursday classes	9. Presenting data	5%
12	Nov 28	Learning to be an effective interviewee	10. Thesis Draft: Revise Sections, Assemble	10%
13	Dec 5	Scheduled Interviews	11. Interviewee Form, Due Dec 5, 9:00 AM	5%
14	Dec 12 Last class	Scheduled Interviews, con't	Thesis Draft will be returned	
Final Exam Week	Dec 19 Tuesday 3:50 PM		12. Thesis Draft Final Revision	15%