

AP Research Syllabus
Northland Preparatory Academy
2021-2022

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Course Description

The AP Research course allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. In AP Research, students cultivate the skills and discipline necessary to conduct independent research and inquiry in order to produce and defend their scholarly work. Students design, plan, and implement a yearlong investigation to address a research question they have generated, developed and revised. Through this inquiry, they learn research methods, employ ethical research practices, and access, analyze, and synthesize information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio (PREP). The course culminates in an academic paper of 4,000–5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense component.

Materials

1. Access to the internet in class, home, or nearby
2. Computer or similar device that supports internet access
3. NPA Google account, Google Classroom, Zotero extension, and EBSCO access. The nature of this course requires these apps for the long term execution of projects, writing, and organizing.
4. Blank, college-ruled, paper
5. Pens, pencils, colored pencils and/or highlighter (anything you prefer for annotating a document)
6. One 3” durable three-ring binder for the Process and Reflection Portfolio (PREP) Binder. These can be of any color or design. You will be using this binder throughout the year to document your research, it should reflect you.
7. Leedy, Paul and Ormrod, Jeanne Ellis. *Practical Research: Planning and Design*. 10th ed. Boston: Pearson Education, Inc., 2013.
8. Turabian, Kate L., et al. *A Manual for Writers of Research Papers, Theses, and Dissertations: Ninth Edition*. University of Chicago Press. 2017.
9. AP Research Course and Exam Description
10. Activities and exercises from the 2020 AP Research Student Workbook

Student Success

Attendance:

Daily attendance and active follow up will result in the strong development of required skills and a strong completion of AP Tasks.

Participation:

Your daily and positive participation in class will ensure a productive learning environment and prepare you for consistent contribution.

Preparation:

Homework, larger tasks, and in-class work will build on prior knowledge and skills. Preparing for class consistently scaffolds your learning to maximize your skills.

Integrity:

Beyond the AP plagiarism statement, listed below, your ability to have respect for yourself, your work, and the work of others, prepares you for an honest approach to life and research skills developed in this class.

AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information.

Participating teachers shall inform students of the consequences of plagiarism and instruct students to ethically use and acknowledge the ideas and work of others throughout their course work. The student's individual voice should be clearly evident, and the ideas of others must be acknowledged, attributed, and/or cited.

A student who fails to acknowledge the source or author of any and all information or evidence taken from the work of someone else through citation, attribution, or reference in the body of the work, or through a bibliographic entry, will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Task. In AP Seminar, a team of students that fails to properly acknowledge sources or authors on the Team Multimedia Presentation will receive a group score of 0 for that component of the Team Project and Presentation.

A student who incorporates falsified or fabricated information (e.g. evidence, data, sources, and/or authors) will receive a score of 0 on that particular component of the AP Seminar and/or AP Research Performance Task. In AP Seminar, a team of students that incorporates falsified or fabricated information in the Team Multimedia Presentation will receive a group score of 0 for that component of the Team Project and Presentation.

[CR2b] — Students develop an understanding of the AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information.

AP Capstone Policy on Equity and Access.

The College Board strongly encourages educators to make equitable access a guiding principle for their AP® programs by giving all willing and academically prepared students the opportunity to participate in AP. We encourage the elimination of barriers that restrict access to AP for students from ethnic, racial, and socioeconomic groups that have been traditionally underrepresented. Schools should make every effort to ensure their AP classes reflect the diversity of their student population. The College Board also believes that all students should have access to academically challenging coursework before they enroll in AP classes, which can prepare them for AP success. It is only through a commitment to equitable preparation and access that true equity and excellence can be achieved.

Positive Learning Environment:

Feedback from instructor, peers, and self-reflection will be given and received in a positive light. While skills are developed, we will learn to build on criticism and learn to give constructive criticism.

Communication:

We will be discussing arguments and ideas, not individuals in the classroom.

Major Assessments

All assessments will be based on the QUEST model of AP Capstone through assignments that build student PREP Binders. We will always clarify the assessment focus which will promote clarity and mastery.

1. **Process and Reflection Portfolio (PREP) - PREP Binder - 100% of course grade**
This task will be completed over the entire course. The exacts of the PREP binder are listed under the like-named heading below. Assignments will guide students through a comprehensive documentation of their research process. A completed PREP Binder will generally document or contain the following: topic exploration, research problem-statement, research question-revision, proposal inquiry, methods development, Institutional Review Board (IBR) approval, source annotations, process reflection, completion of Academic Paper Presentation and Oral Defense, as specifically outlined below. Grades will be based on hard deadline submissions as pass/fails.
2. **Academic Paper (AP) and Presentation and Oral Defense (POD) - AP 75% and POD 25% of AP score**
Students design, plan, and implement a yearlong, in-depth study or investigation in an area of personal interest through a chosen or designed inquiry method and develop a well-reasoned argument based on the evidence collected in an academic paper of 4,000–5,000 words. As a culmination of their research, students deliver (using appropriate media) a presentation and orally defend their research design, approach, and findings. Students whose academic paper is accompanied by an additional piece of scholarly work (e.g., performance, exhibit, product) must arrange for the teacher and panelists to view this work prior to the presentation and oral defense. Throughout the inquiry process, students communicate regularly with their teacher and, when appropriate, consult with an internal or external expert.

Grading Scale

The grading scale will adhere to the norms of Northland Preparatory Academy with grades and feedback made available through Infinite Campus, Office Hours, Google Classroom and through the conference-grading implementation.

Process and Reflection Portfolio (PREP)

This class portion will be used to guide students through their work and will provide an avenue to document major milestones. Student's 3" three-ring PREP Binder will contain the following items.

The indications in parentheses refer to the actual presentation of the given element in the PREP Binder.

1. **Development Chapter**
 - 1.1. Final project title (designed by student)
 - 1.2. Final problem statement (designed by student)
 - 1.2.1. Must include enough *annotated bibliographies* to provide context for the problem statement
 - 1.3. Established research question (designed by student)

- 1.3.1. At minimum, three iterations, including the final product, must be presented
- 1.4. Potential mentors/expert advisors (designed by student)
- 1.5. Research Proposal Part A *must be approved by instructor* (portions of Research Proposal Part A and B may be gathered at different points of time)
 - 1.5.1. Aims of Research (Part A)
 - 1.5.2. Background/Context (Part A)
 - 1.5.3. Literature Review (Part A)
 - 1.5.4. Further Questions(Part A)
 - 1.5.5. Method (Part B)
 - 1.5.6. Potential Outcomes and Limitations of Research (Part B)
 - 1.5.7. Outline Program of Work (Part B)
 - 1.5.8. Bibliography (Part B)
- 2. Methods Chapter
 - 2.1. Research Proposal Part B *must be approved by instructor and IBR*
 - 2.1.1. IRB Application
 - 2.1.2. Aims of Research (Part A)
 - 2.1.3. Background/Context (Part A)
 - 2.1.4. Literature Review (Part A)
 - 2.1.5. Further Questions(Part A)
 - 2.1.6. Method (Part B)
 - 2.1.7. Potential Outcomes and Limitations of Research (Part B)
 - 2.1.8. Outline Program of Work (Part B)
 - 2.1.9. Bibliography (Part B)
 - 2.2. Inclusion of all reproducible documents
 - 2.2.1. Institutional Review Board (IBR) Approval (template given)
 - 2.2.1.1. If your request is denied, include the denied request along with the approved request
- 3. Literature Chapter
 - 3.1. Complete annotated bibliography (discipline recommendation)
 - 3.1.1. Students' annotations must focus on its relevant connection to the *purpose* of the project
 - 3.2. Any reproducible sources printed and contained in binder
- 4. Academic Paper and Presentation and Oral Defense Chapter
 - 4.1. One iteration of a completed rough draft containing the following focus areas:
 - 4.1.1. Introduction
 - 4.1.2. Method, process, or approach
 - 4.1.3. Discussion, analysis, and/or evaluation
 - 4.1.4. Conclusion and future directions
 - 4.1.5. Bibliography (unannotated)
 - 4.1.6. Peer scored AP Rubric
 - 4.2. Final draft of Academic Paper (4,000 - 5,000 word count) with finalized elements from item 4.1
 - 4.2.1. Appendices containing appropriate information
 - 4.2.2. Self-scored AP Rubric
 - 4.3. Presentation and Oral Defense
 - 4.3.1. Google Drive or similar link to prepared and self-recorded presentation (may be a private link)

4.3.2. Peer scored and self-scored POD Rubric

5. Reflection Chapter

5.1. Narrative paper (template given)

- 5.1.1. Compose a serious and wide-scoped reflection about your experiences, both positive and negative, through this research project, specifically:
- 5.1.1.1. Why and when did your research question evolve?
 - 5.1.1.2. What obstacles did you encounter while finding sources for your literature review?
 - 5.1.1.3. How did you arrive at your research method design? Did it change before your final approval from the IRB? How?
 - 5.1.1.4. What did you experience while aligning your research to your field at large? Were you confident it would be received well by that particular community? Why or why not?
 - 5.1.1.5. What was your experience when implementing your research method design? Any unforeseen issues? Moments of clarity?
 - 5.1.1.6. Did your time-management skills developed in Capstone improve or help in a clear way?
 - 5.1.1.7. What was your experience when designing your presentation?
 - 5.1.1.8. Were you confident in executing your presentation and defense? Why or why not?
 - 5.1.1.9. Do you feel you are prepared for research efforts in the future?
- 5.1.2. Include a best practices list, where you offer advice for upcoming AP Research students

Pacing Map

Definitions

There are recurring activities throughout the units of this pacing map. Those recurring activities are listed in italics within the activity sections and denote areas that consistently develop presentation skills, reflection skills, and clear progress.

Forums:

Students will formally update the class in a presentation-style at minimum every month. They will allow for questions from their peers and the instructor at the end of their presentation. This is to both clarify their research development and execution and develop their presentation skills and organization. The instructor will use *Forums* to also inform weekly *Work checks* and will give students a general outline for information that must be covered for clear progress. Finally, students will get feedback on their presentation skills, articulation, and presence with specific goals outlined for improvement.

[CR4b] — Students have regular work-in-progress interviews with their teachers to review their progress and to receive feedback on their scholarly work as evidenced by the PREP.

Work check:

Students will have a minimum of one weekly conference with the instructor. These conferences will serve to clarify questions, develop missing information from their PREP Binders, and plan for forums.

Ultimately, these serve as a checkpoint for students to adhere to a productive timeline and feel confident moving forward with their projects.

Reflection:

The ultimate item in the PREP Binder is the reflection narrative. In order to construct a comprehensive reflection, students will develop skills to reflect immediately on their work. At the culmination of each pacing unit, students will be given guiding questions to reflect on their work which will also inform their final reflection chapter of their PREP Binder.

For example: *How does your research connect to your field at large? Did your research method design change in any way and how? Did you encounter any obstacles collecting studies for your literature review? Did you employ appropriate strategies for preparing your forums in this unit and what were they?*

Unit I: Establishing the Gap

August - September

In this unit, students will explore broad, personal interests and begin narrowing their focus towards a problem-statement and preliminary research question.

Skills

[CR1b] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 2: Understand and Analyze.

[CR4a] — Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR1a] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.

[CR1c] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 3: Evaluate Multiple Perspectives.

Activities

1. Inspect peer-reviewed, scholarly studies that exemplify multiple disciplines and contrasting study methods
 - 1.1. Style
 - 1.1.1. Dissect at least three articles in different fields to note style specific language and citation standards
 - 1.2. Methods
 - 1.2.1. Dissect at least three articles in the students chosen field of interest to report on the variety of methods used in the research design process.
 - 1.3. Analysis
 - 1.3.1. Dissect the analysis portions of the chosen articles to report on the analysis and if/how the authors stay within their field paradigm in terms of presenting information, both written and in presentation.
 - 1.4. Situation

- 1.4.1. Published work itself
 - 1.4.1.1. How do these works align with their literature reviews and context sections?
 - 1.4.2. Field at large
 - 1.4.2.1. How do these works clearly link or zoom out, to their larger fields?
2. Develop topics of interest
 - 2.1. Peer exploration
 - 2.1.1. Through *Work Check, Forum* and research, students will work in tandem to demonstrate the importance or relevance of their topics
 - 2.2. Meaningful problems
 - 2.2.1. Through *Work Check, Forum* students will work to establish problems found in their field that are: relevant and purposeful to the field at large and beyond
 - 2.3. Gap determination
 - 2.3.1. Through *Work Checks, Forums*, close reading practices, reflection on student selected studies, and through open dialogue, students will determine any relevant gaps in the research they have uncovered.
 - 2.4. *Forums*
 3. Narrow topic focus
 - 3.1. Peer exploration
 - 3.1.1. Based on further research, weekly *Workcheck* and reporting to your peers in our weekly *Forums*, students will narrow their topic into a research question and the beginning of a problem-statement
 - 3.2. Discipline alignment
 - 3.2.1. Through class-provided resources, students will determine exactly which academic field their topic falls under
 - 3.3. Gap fill (what kind of data fills the gap)
 - 3.3.1. Based on further research or clarification of existing sources, *Workcheck* and *Forums* students will note different types of data that can potentially fill a noted gap in their narrowed topic
 - 3.4. Methods exploration (how does the method collect that data? What kinds of data are being collected?)
 - 3.4.1. Through class-provided resources and based on potential data types, students will explore generally accepted ways of collecting varying data
 4. *Forums*
 5. *Work Check*
 6. *Reflections*
 - 6.1.1. Students will take time to write out their reflections to this point in their process based on the supplied guiding questions. All written submissions must be tied to the formal reflection narrative in Unit V
 7. PREP Binder
 - 7.1. Positively progress through Item 1: Development Chapter

Summative Assessments

Using PREP tasks as outlined under the PREP Binder heading above, students will demonstrate an understanding and application of the skills specified in this unit.

Unit II: Research Design and Alignment

October - November

Students must progress from an established problem-statement and research question to discover the data needed to add to the discipline's scholarly conversation. The process of research design encompasses a thorough understanding of the kinds of data that exist, discipline-standards in studies, ethics that guide data collection, and how to align that data to the student's purpose.

Skills

[CR1a] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 1: Question and Explore.

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR2a] — Students develop an understanding of ethical research practices.

[CR1d] — Students develop and apply discrete skills identified in the learning objectives within the Big Idea 4: Synthesize Ideas.

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR3] — In the classroom and independently (while possibly consulting any expert advisors), students learn and employ research and inquiry methods to develop, manage, and conduct an in-depth investigation of an area of personal interest, culminating in an academic paper of 4,000-5,000 words that includes the following elements:

- Introduction
- Method, Process, or Approach
- Results, Product, or Findings
- Discussion, Analysis, and/or Evaluation
- Conclusion and Future Directions
- Bibliography

Activities

1. Basics of data collection
 - 1.1. Range of collection methods
 - 1.1.1. Students will have group discussion concerning selected pages regarding data collection methods presented in Williams' *Research Design: The Basics* and appropriate handouts from the AP Research Workbook
 - 1.2. Qualitative data
 - 1.2.1. Students will explore a variety of qualitative data and reflect on what kinds of data is being collected in their field
 - 1.3. Quantitative data
 - 1.3.1. Students will explore a variety of quantitative data and reflect on what kinds of data is being collected in their field

- 1.4. Mixed-method approach
 - 1.5. Ethics in research
 - 1.5.1. Students will answer questions concerning consent, privacy, and safety based on denied research proposals and approved research proposals and information from *Research Design: The Basics*
 - 1.6. *Forums*
 - 1.6.1. These specific forums will relate to students' specific data needs, possible research implementation and limitations, and considerations concerning the development of their research design. Supporting literature will be expected at all forums.
2. Data Specific Design
 - 2.1. Data determination
 - 2.1.1. Students will make final calls on the types of data they will collect based on the *Levels of Abstraction* presented in *Research Design: The Basics*.
 - 2.2. Parameters for research
 - 2.2.1. Students will determine more concretely, how they will design their research in accordance with norms in research and their fields
 - 2.3. Analysis and discussion
 3. *Forums*
 4. *Reflections*
 - 4.1. These specific reflections will help students recount how their research designs are aligning to their larger field and fill a documented gap in research
 - 4.2. Students will take time to write out their reflections to this point in their process based on the supplied guiding questions. All written submissions must be tied to the formal reflection narrative in Unit V
 5. Rubric Digest
 - 5.1. AP rubric summary and discussion
 - 5.2. Score sample AP Papers
 6. *Reflections*
 - 6.1.1. These particular reflections will cover what students hope to see happen in the next Unit along with guiding questions that tackle how they've arrived at their decisions and how they feel they align with their field at large and earlier problem statements.
 - 6.1.2. Students will take time to write out their reflections to this point in their process all written submissions must be tied to the formal reflection narrative in Unit V
 7. *Work Check*
 8. PREP
 - 8.1. Positively progress through Item 2: Methods Chapter

Summative Assessments

Using PREP tasks as outlined under the PREP heading, students will demonstrate an understanding and application of the skills specified in this unit.

Unit III: Drafting Academic Paper

November - January

After determining the appropriate data needed to ‘fill’ the gap in the literature and deciding how their research method will align with their research-statement, students must execute their proposed research design. While this process concludes, students will draft their Academic Paper with a primary focus on their Literature Review.

Skills

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

Activities

1. Execute approved studies
 - 1.1. Students will implement their research design
 - 1.2. Collecting and Analysing
 - 1.2.1. Students will begin to collect and analyze their data as specified in their approved research proposals
 - 1.3. *Forum*
 - 1.3.1. These forums will focus on continued progress of students’ implementation plans, preliminary results, and surprises
 - 1.4. *Reflections*
 - 1.4.1. These reflections will focus on continued progress of students’ implementation plans, preliminary results, and surprises
 - 1.4.2. Students will take time to write out their reflections to this point in their process all written submissions must be tied to the formal reflection narrative in Unit V
2. PREP
 - 2.1. Positively Progress through Items
 - 2.1.1. 3: Literature Chapter
 - 2.1.2. Through 4.1.5: Academic Paper Chapter

Summative Assessments

Using PREP tasks as outlined under the PREP heading, students will demonstrate an understanding and application of the skills specified in this unit.

Unit IV: Academic Paper and Presentation and Oral Defense

February - April

Students will use peer-editing to assist them in completing the Academic Paper (75% of AP score) based on the Academic Paper Rubric as described through the PREP Binder. Students will also develop a multimedia presentation based on the Presentation and Oral Defense (25% of AP score) Rubric that will not exceed twenty minutes. This

presentation will be given in front of a three member panel and the public. Oral defense questions will come from a predetermined list of possible questions.

Skills

[CR1e] — Students develop and apply collaboration skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR4a] — Students document their inquiry processes, communicate with their teachers and any expert advisors, and reflect on their thought processes.

[CR5] — Students develop and deliver a presentation (using an appropriate medium) and an oral defense to a panel on their research processes, method, and findings.

Activities

1. Complete and submit AP Paper
2. Develop Impactful Presentation
 - 2.1. Organize information
 - 2.1.1. Students will determine the best flow of information and what information is critical to deliver
 - 2.2. Why the slide?
 - 2.2.1. Students will make professional use of slides to only bring more impact to their organized ideas and words
 - 2.3. Gestures, pacing, and passion
 - 2.3.1. Students will ‘choreograph’ parts of their presentations, emphasize that they are authorities, and prepare to execute their presentations under control and poise - all of these items will have been developed through Forums and practice
3. *Forums*
4. *Work Check*
5. PREP
 - 5.1. Positively progress through items 4.2-4.3.2

Summative Assessments

Students will upload their finalized Academic Papers to their AP Digital Portfolio by **Friday, April 1st, 2021** and execute their Presentation and Oral Defense by **Wednesday, April 27th, 2022**

Unit V: PREP Completion and Reflection

May

The sharing and reflection of the research process not only clarifies the experience for the researcher but provides the context for future research students.

Skills

[CR1g] — Students develop and apply written and oral communication skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

[CR1f] — Students develop and apply reflection skills identified in the learning objectives within the Big Idea 5: Team, Transform, and Transmit.

Activities

1. PREP
 - 1.1. Positively progress through Item 5: Reflection Chapter for the completion of your PREP Binder
2. Reflective Presentation
 - 2.1. Orally present a five minute reflection that overviews your complete PREP Binder

Summative Assessments

Completion and oral reflection through each student's PREP Binder.

This completes the AP Research Syllabus for SY' 2022
